THE METROPOLITAN COMMUNITY OF BELO HORIZONTE, MINAS GERAIS, BRAZIL: AN ECOLOGICAL ANALYSIS OF LOCALITY GROUP INTEGRATION

by

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In this descriptive analysis of the socio-ecological organization of the metropolitan community of Belo Horizonte, Brazil, the kinds of rural neighborhoods and the types of rural, rurban, and urban communities were identified in the influence area of Belo Horizonte. Boundaries dividing locality groups of various types and factors ecologically integrating the different levels of locality groups were determined within the metropolitan community system.

Changes in the inter-related factors of environment, population, and technology were shown in the development of this complex form of social organization within a frame of reference developed by T. Lynn Smith.

Delineation was made of the territorial boundaries of thirty-nine locality groups within the metropolitan influence area. Comprehensive investigation of the boundaries, socio-cultural characteristics, and the functional inter-relationships with higher-level localities were presented for fourteen rural neighborhoods, four incomplete communities, two rural communities, one rurban community, two urban

communities, and the metropolitan community of Belo Horizonte. The data were obtained through interviews concerning trade and service patronage areas, by personal observation, and from governmental agencies, commercial establishments, and social service institutions. To increase the validity of the results of the study, localities were selected from several regions within the metropolitan community area, differing in topography, climate, population density, economic activity, and quality and quantity of roads.

A description was given of the origins of settlement in the late seventeenth century and of the subsequent stages of ecological succession prior to the emergence of the metropolitan community. The primary factors responsible for the development to metropolitan status (1950-1973) were determined: the increase in aggregate population of Belo Horizonte (from 352,724 in 1950 to 1.2 million in 1970) and of a number of satellite cities; the expansion in variety of controlling economic, financial, social, cultural, and governmental institutions, located in the metropolis, that function for the entire metropolitan community; and the creation of extensive highway, transportation, and communications systems facilitating the flow of goods and services between Belo Horizonte and other parts of the community. The study has shown that Belo Horizonte's attainment of metropolitan status has resulted in its increasing ability to compete with the cities of São Paulo and Rio de Janeiro for dominance within the state of Minas Gerais.

The increasing differentiation in the locality group structure of the maturing metropolitan community was demonstrated by identifying a variety of sub-types within the general classification of neighborhood

and community. Three types of rural neighborhoods were identified: the *fazenda* (large farm) neighborhood, the nucleated neighborhood of small farms, and the neighborhood of scattered small farms. Two sub-types at the level of the incomplete community were identified: one having a hamlet as nucleus and the other, a small village as nucleus. Other sub-types included: the rural community with a large village as center; the rurban community with a town as center; and three sub-types of urban communities with a factory city, a trade and service city, and a multi-functional city as centers, respectively.

Because of the rapidly changing character of the ecological organization of the metropolitan community, because of the development of a modern highway system and the greater use of motor vehicles, this variety of multiple centers subordinate to the metropolis has been providing increased economic, social, and cultural services to large numbers of people residing in the metropolitan community.

PART I

INTRODUCTION

Chapter 1
Introduction

This descriptive and analytical study of the present level of socio-ecological integration of the metropolitan community system of Belo Horizonte, Brazil, focuses primarily on the initial stage of metropolitanization, 1950 to the present, with reference to the historical background of the metropolitan system, from pioneer colonial settlements in the beginning of the eighteenth century through successive stages of human ecological development during the first half of the twentieth century, insofar as this background relates directly to the emergence of the present community structure.

Objectives

This work has several principal objectives: (1) to determine boundaries which separate locality groups of various types; (2) to identify kinds of neighborhoods and types of rural, rurban, and urban communities found in the influence area of Belo Horizonte; (3) to determine the coincidence, or lack of it, between social areas and administrative units; and (4) to identify factors which ecologically integrate various levels of locality groups. More specifically, in this study an attempt has been made to present information concerning types of locality groups that exist in the metropolitan community of Belo Horizonte and the degree to which these groups are socio-ecologically

integrated into this system, as well as to relate changes in environmental, demographic, and technological conditions that have contributed to the establishment and development of this complex form of social organization. Conditioning factors include the following: (1) the natural environment in terms of climate, topography, soils, and resources; (2) the dynamics of population size, distribution, and migratory movements; (3) the forms of economic, social, and political institutions derived from the larger society and adapted to the local situation; (4) the changing technology, particularly in communications and transportation, that modifies the social and economic activities among various locality groups in the metropolitan community system.[1]

There has been a significant lack of published sociological research on the types and varieties of locality groups presently found in more developed regions of Brazil, and there is even less research on the study of ecological integration in a metropolitan community system. Thus, the primary reason for this project stemmed from the need for exploratory research.

The nature of the unit chosen for study, the locality group, requires an empirical investigation to delineate the territorial boundaries which exist for such social groups. Since census data only exist for administrative divisions, too often social scientists and planners have used administrative units such as *municípios* and states simply because the data are in that form. This expedient is often counterproductive to the aims of social scientists and planners, because they are attempting to use that data to define significant areas of social interaction for practical or analytical reasons. Therefore it will be

more productive to seek to define the natural community boundaries in order to better understand functional integration among various locality groups. For this reason, this study has been undertaken so that a more thorough understanding of the structure and process of metropolitan community systems can be achieved, especially of Brazilian metropolises.

Scope of the Study

The perspectives of space and time were considered in limiting the scope of the study. It has been limited to the portion of the state of Minas Gerais, Brazil, that is under the influence of the metropolis of Belo Horizonte, the capital city of the state, one of seven major metropolitan communities in Brazil.[2] This particular geographic area has been selected because of its functional complexity and its phenomenal rate of growth.[3] Within this metropolitan community an entire spectrum of locality groups is found, including those based on agriculture, stock-raising, mining, manufacturing, and service industries.[4] Furthermore, its sociological significance is enhanced by (1) its nearness to Brazil's two largest metropolitan centers, Rio de Janeiro and São Paulo, and by (2) a recent increase in Belo Horizonte's ability to compete with its huge neighbors.

Temporally, the focus of this study is on the period from approximately 1950 to 1973 and on the process whereby Belo Horizonte changed from an isolated interior administrative center to a nationally integrated metropolis serving as the center of a vast metropolitan community. Although this study is primarily concerned with the present community form and structure, it includes descriptions of settlement

patterns from earlier periods to show the transformation of rural isolation and dispersion into the present community structure.

Concepts

Several key concepts are used frequently in this study. Therefore, these terms will be defined so that the precise use of terms will be clear to the reader. Most of these terms will be presented in greater depth in later chapters.

Ecology is a branch of sociology concerned with the spacing of people and institutions, and the resulting interdependency. Another way of defining *social ecology* is: the collective adaptation of a population to its environment, including the physical arrangement of that environment and the distribution and organization of people in physical arrangement and social behavior.

A *locality group* is a social group based primarily on shared territorial occupation, in which the residents' interests and activities frequently converge in areas of common life, association, and mutual aid. Examples of the major classes of locality groups are the neighborhood, the community, and the society.[5]

Community is used for a strictly ecological phenomenon, as one form of locality group that shares a physical area; forms a social group and an area of social interaction; creates a psychic, informal identity for members; and provides for the fulfillment of a complete range of needs by members. In contrast, the neighborhood is smaller, relies more on face-to-face relationships and mutual aid, and rarely has facilities to provide for all the needs of residents.

Metropolis denotes a large city characterized by great functional complexity as well as an extensive tributary area, or sphere of influence, which contains satellite towns and rural communities and neighborhoods. Usually, the metropolis has a population of more than one million inhabitants and, because of its size, frequently transcends its regional role to attain society-wide importance.

Metropolitan community system refers to a significant degree of ecological integration that exists between the metropolis and numerous lower-level locality groups found in an extensive zone of influence. The network of community interrelationships centering on the metropolis constitutes a system, i.e., a bounded pattern of functional relationships among component parts.[6]

Level of integration represents the locality group level, varying among complex societies, at which the most significant social solidarity occurs. For example, in Brazil the most significant social solidarity, until recently, was found in the rural neighborhood. Since transportation and communication were undeveloped, kinship formed the base of social life; common economic interests encouraged cooperation; and the majority of rural people maintained a high degree of independence from urban commercial establishments and from production for market.[7]

Significance of the Study

This study of the Brazilian metropolitan community system contributes to the sociological literature in several ways. The analysis of levels of locality group integration in this study has avoided the character of holistic small-community studies. It follows the suggestion

that a hierarchy of locality groups forms the basis of social interaction in complex societies.[8]

In the literature on Brazil, this is the first study in any discipline on the functioning of Brazil's third-largest metropolis, Belo Horizonte. Nevertheless, insight into a particular social problem of a single community has not been sought. In the study of several levels of locality groups, generalizations based on an isolated case were avoided. Finally, this study provides the kind of overview of a metropolitan community system that necessarily precedes any significant problem research.

In addition, this study has several implications that transcend its academic purpose. (1) It contributes to the literature on the process of urbanization in Latin America. (2) It provides insight into the special nature of the process of modernization in developing countries and makes more evident the role of metropolitan communities in effecting modernization. (3) It furnishes a case study of the development, structures, and functioning of a metropolitan community system, showing how locality groups of various sizes and varying importance are integrated into a metropolitan community. The approach used in this study shows the extent of functional interdependence among communities of various sizes, which previous research perspectives, as in studies of "isolated" communities, have tended to obscure. (4) The case study supplies a model useful to regional and community planning agencies which are responsible for social services and infrastructure.[9] (5) The particular metropolis, Belo Horizonte, is an especially significant choice, because it forms an important part of one of the most dynamic regions of Latin America, namely, Brazil's industrial heartland.

Sources and Use of Data

Various sources of data have been used, and an attempt has been made to identify each source as data are presented. Most of the materials to be used resulted from personal observation and data from other primary sources. The choice of criteria for determining the service areas of various levels of locality groups depended on several factors, including the nature of the core metropolis and its surrounding region. Those agencies which were espeically helpful in providing various types of data are the following:

Instituto Brasileiro de Geografia e Estatística (IBGE)
(Brazilian Institute of Geography and Statistics)
for census information, maps, and socio-economic data on municípios.

Centro de Planejamento Regional (CEDEPLAR)
(Center for Regional Planning)
for information on internal migration and metropolitan area mapping.

Fundação João Pinheiro (João Pinheiro Foundation)
for information on satellite cities in the metropolitan area.

Instituto de Geo-Ciencias Aplicadas (Institute of Applied Geo-Sciences)
for maps of individual municípios.

Conselho Estadual do Desenvolvimento (State Development Council)
for publications containing relevant socio-economic data.

A significant amount of useful material was obtained through personal visits to the following headquarters of agencies:

Serviço Federal de Habitação e Urbanismo (SERPHAU)
(Federal Housing and Urbanization Service.

Estado de Minas and *O Globo*, newspapers.

Secretaria de Educação (State Department of Education).

Associação de Crédito e Assistência Rural (ACAR) (Rural Assistance and Credit Association).

Departamento de Estradas de Rodagem do Estado de Minas Gerais (DER) (Minas Gerais State Department of Highways).

Comissão de Desenvolvimento do Vale do Jequitinhonha (CODEVALE) (Jequitinhonha Valley Development Commission).

(Agencies will be referred to by acronym hereafter.) Two other sources were especially helpful in determining the gross outlines of the Belo Horizonte metropolitan community:

Centrais de Abastecimento de Minas Gerais (CEASA) (Minas Gerais Supply Center).

Cooperativa Central dos Produtores Rurais de Minas Gerais (ITAMBE) (Central Cooperative for Rural Producers of Minas Gerais).

The writer himself observed the patterns of social interaction in the area under study in order to gather information not available or not collected by these various agencies. (The problems inherent to census data have already been mentioned.) For this purpose, nine months, from November, 1972, to July, 1973, were spent traveling throughout the area influenced by Belo Horizonte, driving thousands of miles in the interior of the state of Minas Gerais.

The average time spent in any one community was three or four days, but in communities studied in more depth, several longer visits, from a week to ten days, were made, sometimes staying in hotels but often as a guest in the homes of Brazilians, especially in communities where more time was spent.

Notes were made as soon as possible after an experience or observation. Interviewees were asked to map areas of patronage at the time of the interview. Various persons were interviewed during these travels,

using formal schedules as well as informal conversations. Residents of rural neighborhoods (*fazendeiros* and *sitiantes*) were interviewed concerning the limits of rural neighborhoods and the extent of contacts and links with other locality groups.

Also interviewed were officials and employees of local agencies and branch offices of state and federal agencies, such as

schools and universities,
hospitals,
governments of municípios,
transportation departments,
agricultural extension offices (ACAR),
rural workers' social security offices (FUNRURAL),
census bureau offices (IBGE),
state agricultural supply stores (COMAG).

In the private sector were interviewed

owners of retail stores,
representatives of chambers of commerce,
publishers of newspapers,
operators of radio stations,
members of fraternal organizations,
owners and managers of small industries and cooperatives,
bankers,
employees of bus companies,
priests, ministers,
wholesalers,
operators of hotels,
administrators of hospitals,
doctors and dentists.

Social occasions were fruitful sources of data about neighborhood and community activities and interaction and included

expositions,
inaugurations of public buildings,
sports events,
marriages,
funerals,
club meetings
meetings of parent-teacher associations,
functions at social clubs,
public observances on religious and secular holidays,
private parties,
Carnival.

Order of Procedure

The exposition of the material of this study is divided into four parts. Included in Part I is an introductory chapter stating the objectives and the scope of the work, the sources of data collected, and the methodological procedures used. In addition, a defense of the study has been made in terms of its significance and contribution to the sociological literature on locality groups, as well as its possible application to the process of modernization. Chapter 2 reviews the relevant theoretical formulations and empirical studies published to date, as well as the identification, delineation, and integration of locality groups.

In Part II are discussed the origins and subsequent evolutionary stages of the present form and structure of the Belo Horizonte metropolitan community. Included in this discussion are geographic characteristics of the region and historical factors responsible for the socio-ecological transformation of the community.

Part III consists of six chapters, one for each of the types of locality groups identified in this study, i.e., the rural neighborhood; the incomplete, or partial, community; the rural, the rurban, the urban, the metropolitan communities. In each of these chapters the conceptual basis for the designation of a type of locality group is given, followed by a description and structural analysis of one or more representative case studies.

Finally, Part IV presents a summary of these findings, dealing primarily with new socio-ecological forces that are intensifying the integration of locality groups within the Belo Horizonte metropolitan community system.

NOTES

1. See Otis Dudley Duncan, "Human Ecology and Population Studies," in Philip M. Hauser and Otis Dudley Duncan, eds., *The Study of Population* (Chicago: University of Chicago Press, 1959), pp. 678-716; containing a detailed exposition of the concept *ecosystem* and the interrelational factors of environment, population, technology, and social organization.

2. Marilia Velloso Galvão, "Divisão regional do Brasil," *Revista Brasileira de Geografia*, no. 4, pp. 179-218.

3. T. Lynn Smith, *Brazil: People and Institutions*, 4th ed. (Baton Rouge: Louisiana State University Press, 1972), p. 594.

4. Harold M. Clements, Jr., *The Mechanization of Agriculture in Brazil: A Sociological Study of Minas Gerais* (Gainesville: University of Florida Press, 1969).

5. T. Lynn Smith, *Studies of Latin-American Societies* (Garden City, N.Y.: Doubleday-Anchor, 1970), p. 140; T. Lynn Smith and Paul G. Zopf, Jr., *Principles of Inductive Rural Sociology* (Philadelphia: F. A. Davis Co., 1970), p. 243; Smith, *Brazil*, p. 428.

6. T. Lynn Smith, *Colombia: Social Structure of the Process of Development* (Gainesville: University of Florida Press, 1967), p. 306.

7. Smith, *Brazil*, pp. 450-54.

8. Smith, *Colombia*, p. 287.

9. T. Lynn Smith, "Some Aspects of Rural Community Development in Brazil," *Luso-Brazilian Review*, X:1, (June) 1973, pp. 17-18, advocates application of the ecological perspective in designating most appropriate areas or units for development programs; see also T. Lynn Smith, *Brazilian Society* (Albuquerque: University of New Mexico Press, 1975), Ch. 8.

Chapter 2
Review of Literature

This short review of the literature examines and summarizes basic contributions in some publications relevant to the study of socio-ecological identification, classification, and integration of locality groups in community systems. To date, no comprehensive study of a metropolitan community has used an ecological framework in analyzing the integration of various levels of locality groups within the zone of influence of a metropolis. There are however a number of works which have constructed typologies of locality groups, primarily based on polar types such as the rural-urban dichotomy, but these polar types lack sufficient designations for a variety of units which have significant degrees of social solidarity based on locality. In addition, there have been works taking as their object the characterization of different categories of locality groups, e.g., the rural, urban, and metropolitan communities, but there has been no over-all, empirical study showing how various levels interrelate and are integrated into a metropolitan community system.

Works to be presented are grouped in the following categories:

1. The typology and taxonomy of locality groups,
2. Approaches to the delineation and identification of socially significant ecological boundaries of locality groups,
3. The levels and degrees of integration among locality groups.

Typology and Taxonomy of Local Groups

The terminology for genuine social groups with territorial bases has in the past been limited to two designations, the neighborhood and the community.[1] This limited range of designation has made difficulties for social scientists and others interested in analyzing social interaction, who have resorted to designations of territorial units which do not denote genuine locality groups. As a result, confusion exists in the literature which attempts to define the spheres of interaction of territorially based units.[2] Furthermore, scholars interested in genuine social groups have avoided the discussion of territorial basis in order to emphasize some aspect of socio-cultural differentiation, often a polar dichotomy. Although such dichotomies have not taken territoriality into account, they still offer important conceptual insights for constructing a typology of locality groups. For example, Durkheim's distinction between mechanistic and organic solidarity and Cooley's distinction between primary and secondary groups[3] are both ways of distinguishing between small, intimate groups and large, impersonal groups. These classical sociologists believed that they had discovered key concepts that differentiated the new urban industrial, complex societies from the traditional agrarian societies.

Emile Durkheim saw the concepts of mechanistic and organic solidarity as ideal types and not as classes of actual groups. Mechanistic solidarity, according to Durkheim, is a characteristic of "primitive" society, where individuals are bound together by common interests, homogeneity, public opinion, and tradition. Organic solidarity is a characteristic of "civilized" societies, where individuals

are bound together by interdependence on each others' services.[4] Durkheim believed that organic solidarity was replacing mechanistic solidarity. He did not, however, draw synchronic models, including relationships between various territorial entities, to exhibit the contrasts between mechanistic and organic solidarity, although later scholars have applied the concepts in this manner.

Charles H. Cooley, unlike Durkheim, defined a concept, *primary group*, to refer both to an actual group and to a particular quality of relationship. He did not deliberately create a dichotomy model, although the effect, and perhaps the intent, of his distinction was to do so. What he set out to do was to define the characteristics of a certain fundamental form of relationship, common to all human experience, which contributes to the development of human personality: face-to-face, cooperative associations.[5] Cooley was interested in the factor of physical proximity, but only insofar as it correlates with primary relationships. Later sociologists have incorporated the concept of primary group in characterizing the neighborhood as a distinct type of locality group.

Following these attempts at dichotomy models, sociologists became interested in applying such ideal types to actual phenomena and as a result began to refine the concept of *community*, so it could be applied to existing social groups, gleaning key features from the dichotomy models presented earlier. In one of the first attempts to circumscribe a type of locality group and to distinguish it from other types, Robert M. MacIver defined *community* as a territory in which the whole of a life could be passed.[6] Many scholars have praised this

definition, although it has been criticized for lacking precise territorial limits which can be replicated.[7]

Another approach to the study of communities using a more precise definition of territoriality is that of social ecology. In the early part of the twentieth century, Charles J. Galpin, Robert E. Park, and Roderick D. McKenzie were among the pioneers studying locality groups as territorial entities, making major contributions to rural and urban sociology.

Galpin viewed the rural community as a territorial entity with a complete range of social functions. However, he discerned its ecological structure as consisting of a trade and service center with a surrounding zone of farm families and rural neighborhoods in functional interdependence with the center. His work also included practical methods for delineating the boundaries of a genuine rural community, which will be discussed below.[8]

Park and his students studied the city, especially the city of Chicago, using an ecological analysis of natural patterns of spatial distribution. However, these studies rarely, if ever, dealt with parts of the urban community outside the city limits.[9]

McKenzie was first to see that the city was being superceded by the metropolitan community as the important urban unit in many areas of the United States. McKenzie characterized metropolitan communities as consisting of highly developed centers extending spheres of socio-economic influence which brought formerly isolated areas under the dominance of these centers through changes wrought by new forms of transportation and communication.[10]

However, neither Galpin, Park, nor McKenzie attempted to develop a complete classification of locality groups based on ecological and socio-cultural criteria. In describing and analyzing various types of locality groups, some recent sociological studies have failed to establish a taxonomic system covering the whole range of locality groups, although recognizing distinctive qualities of these types and using such conventional adjectives as rural, urban, small-town, and suburban.

T. Lynn Smith has offered the most complete empirically based classification scheme taking into account both ecological and socio-cultural features of locality groups. He has emphasized that administrative units should not be confused with social units and that nucleated settlements are not necessarily complete social groups. His taxonomy begins with the rural farm family and the rural neighborhood, both of which are characterized almost exclusively by primary group relationships. The hamlet-centered locality group; the semi-, incomplete, and partial communities; the rural community, with a village nucleus; the rurban community, with a balance between agricultural-pastoral and urban activities such as commerce, transportation, and manufacturing; the urban communities; and the metropolitan community are all characterized by a mix in locality groups of higher levels.[11] Smith has advocated the expansion of his taxonomy into a system with a greater number of designations of locality groups, especially in the areas of partial and urban communities.

Thus, from this discussion of typology and taxonomy of locality groups it is clear that additional empirical study can add to a literature which has focused on polar ideal types, or simply on one or another

kind of locality group, without placing it in the perspective of its relationship with other such groupings. The present study adds to the characterization of these categories of communities in areas indicated by Smith as lacking sufficient designation and shows the range of locality groups most likely to be found within the largest type of locality group, the metropolitan community.

Delineation and Identification of Locality Groups

The best means of creating a useful typology of locality groups is to choose as the distinguishing feature of each group some mechanism for relating social functions to spatial extent. Social functions tend to create different types of social cohesion in the economic, political, and social spheres. The nucleus of each locality extends a sphere of influence via social functions which integrate the members of the group. The places of residence of such members, coupled with the territory in which members interact, mark the territory of the locality group. The literature relevant to attempts to delineate and identify such territories and groups demonstrates a number of methodological approaches and techniques which have been employed in this effort.

Charles J. Galpin was first to associate territoriality with locality groups. For instance, he recognized that the rural neighborhood in the United States is the focal point for the social organization of scattered farm settlements,[12] which are frequently integrated about a common institutions, a school, a store, a club or other voluntary association, a church, a factory, a mill, or some other service facility. His contributions to the delineation and identification of rural

communities will be treated below, following discussion of contributions to the literature on rural neighborhoods.

An important concept which lies behind the effort to delineate locality group boundaries is Robert Park's *natural area*. A natural area is, according to Park, a geographic territory of relative cultural homogeneity, with physical boundaries in the city: an unplanned response to the workings of local customs, traditions, social rituals, laws, public opinion, sustenance activities, and the prevailing moral order.[13] Park's main contribution in making this concept current was in taking the idea from Galpin's rural context and introducing it into the urban milieu.[14] Galpin and his followers had previously shown that the concept of a naturally bounded territory is a factor in delimiting rural neighborhoods and communities.

The idea of natural area, of course, continued to be important to students of rural neighborhoods, as well as to students of the city. Sorokin, Zimmerman, and Galpin were interested in defining elements which are necessary for the development of true rural social groups. These groups, the most simple of which is the rural neighborhood, are held together by a number of social bonds, or links, including three related to territoriality: (1) territorial proximity, (2) common possession and utilization of land, and (3) living, experiencing, and acting together.[15] This view allows non-nucleated settlements to be included in the category of locality groups with a truly common way of life.

The inclusion of scattered settlements in the concepts of neighborhood and community has been very important in the development of a

rural sociological analysis for both the United States and Brazil, an effort to which T. Lynn Smith has made outstanding contributions. In both of these societies, scattered farmsteads have been the dominant form in the rural settlement pattern, and farmers have tended to reside on the land they work.[16] Nevertheless, it has been subsequently shown that types of social bonds exist among residents of these scattered farmsteads in the areas of kinship, marriage, religion, language, common economic interests, mutual aid, and dependence on the same institutions. These are the very social bonds which bring about the existence of true social groups, according to Sorokin, Zimmerman, and Galpin.

Thus, among American rural sociologists, the idea of "open country" neighborhoods offered a concept central to the analysis of rural life.[17] Studies of the delineation of rural neighborhoods in the United States have included Williams' attempt to identify a consciousness of intimate relations among rural neighbors.[18] In a pioneer study Kolb used the tactic of eliciting the name associated with the locality from its residents.[19] Taylor and Zimmerman criticized Kolb's method but did not deny the existence of rural neighborhoods as viable entities.[20] However, later studies by Jehlik and Losey, Jehlik and Wakely, and Kolb's own re-studies[21] showed that in the three decades since the first studies were made, the integration and solidarity of rural neighborhoods were being undermined by improved transportation and communications which more strongly linked farm families to towns, villages, and cities. As a result of all these studies, neighborhoods are today considered as components of more complex intergroup systems, not as self-contained systems.

One of the first delineation studies of a Latin American neighborhood was done by Orlando Fals-Borda, using methods established by American rural sociologists. Fals-Borda found that the neighborhood is bound together by mechanistic solidarity characterized by homogeneity in political party preference, religion, language, race, kinship, school facilities, economic activities, and recreational habits. In addition, he found that traditions, mutual interdependence, and a sense of belonging help to create bonds of solidarity. Fals-Borda explained that the natural area of the neighborhood is largely determined by physical features: the size of holdings, where they lie, and the nature of the terrain. Two conclusions should be noted in this case study. First, despite the self-contained nature of the neighborhood, it remains essentially a part of a larger intergroup system, especially the administrative governmental unit. Second, the physical territory of the neighborhood is a natural area determined by a combination of topographic and social features.[22]

Another excellent example of neighborhood delineation was provided by Ernesto E. Vautier and Orlando Fals-Borda.[23] One of the contributions of this study is to distinguish between two sub-types of rural neighborhoods, the smaller and the larger, offering a designation for locality groups which are neither small homogeneous neighborhoods nor complete communities and adding to the designations available for partial, or incomplete, communities; the lack of which has been noted previously.

T. Lynn Smith presented an analysis of varieties of rural neighborhoods in Brazil, based on travels and research there. He too

indicated that ecological features, such as networks of trails, physical features of the terrain, and settlement-pattern densities, often influence the morphology of such neighborhoods and that a study of these features would aid in the delineation of rural neighborhoods.[24]

It is not just to the dispersed rural neighborhood that physical area is important. All locality groups with nuclei of a higher order than the rural neighborhood have spheres of influence or natural areas, which have come to be known as hinterlands. The concept of hinterland is important for the study of communities in general and as a tool to distinguish between rural and urban communities. A *hinterland* is an area surrounding a nucleus (an agglomerated settlement, village, town, city, or metropolis) that exhibits functional interdependence with that nucleus via social and economic interaction.

Ecologist Amos Hawley was concerned with the structure of communities, including conceptualizing nucleated and dispersed areas. He called hinterlands *community areas*, a term to be used hereafter because it does not cognitively dichotomize between the nucleus and the dispersed areas as much as the term *hinterland*. Hawley said that there are three types of community areas: primary, secondary, and tertiary. All communities have primary areas in which residents work, purchase food, and meet basic needs. Secondary areas have an irregular exchange with the nucleus in order to purchase durable goods and to obtain specialized medical, legal, and financial services, and entertainment.[25] Tertiary areas are found only in conjunction wtih metropolitan communities where the metropolis functions in a specialized way for an entire nation or a very large area, e.g., as New York functions as financial center for the United

States. Rural communities, then, have only primary community areas, while urban communities have primary and secondary community areas, and metropolitan communities have all three types of community area.

The delineation and study of the genuine rural community, including its primary community area, was pioneered by Charles J. Galpin in a now-classic study of Walworth County, Wisconsin. Galpin sought the relationships among scattered-farm residents and various nucleated settlements. His method was to interview merchants, bankers, milk station operators, ministers, and teachers to find out the distance that farmers traveled to reach the center. In addition, a number of farmers were interviewed to find out where they obtained key services such as banking, shopping, milk processing, school attendance, church participation, newspaper subscription, and library use. The study showed that each village had a trade zone that overlapped or ignored political boundaries. Galpin concluded that these trade zones are the territorial areas of functioning rural communities with village nuclei.[26]

As a result of this work, the first of its kind, Galpin became known as the father of service area community delineation studies. Subsequent studies followed Galpin's methodological model. For example, Sanders and Ensminger studied several rural villages and associated community areas in Alabama.[27] An intensive study of a Latin American community delineation was reported in Painter's work on Turrialba in Costa Rica.[28] A similar delineation study was completed by Saunders in Bradford County, Florida.[29]

The indices used in various studies to delineate community areas are, in general, based on indicators of business, credit, trade, commerce,

professional services, education, religion, and recreational activities. However, in different cultures the relative importance of various factors seems to differ. Smith pointed out that the open country church is often the most important factor in integrating United States rural neighborhoods, while the large parish church, located in village or town, fosters integration at the community level in Brazil.[30]

Another level of community is the *rurban community*, a designation referring to the fact that agricultural-pastoral and non-agricultural or urban activities are of approximately equal importance in the community. Ecologically, this type of community usually has a town center with a surrounding tributary zone. Galpin predicted that this type of community will be the probable end result of expanding transportation and communications in the United States.[31] This prediction has not realized itself in the United States. However, as Smith has indicated, in certain regions of Brazil and Colombia the inclusion of rural and urban areas in the same administrative unit the *município*, has probably lead to the emergence of rurban communities.[32]

The concept of *community area* as defined by Hawley is linked to urban and metropolitan communities more than to rural or urban ones. The importance of urban spheres of influence was first recognized when Roderick D. McKenzie pointed out the effect of large cities on surrounding smaller rural and urban communities. The concept of community area has been used in a number of studies of urban influence areas made by geographers using a number of factors to determine the social and economic integration of towns and open country areas under the influence of a city.

Boundaries of urban communities have been the subject of works by Harris on Salt Lake City, Ullman on Mobile, Dickinson on "city-regions"

in England and Western Europe, and Green on England and Wales.[33] A number of studies have been made in various countries, delineating urban influence areas. Beaujeu-Garnier and Chabot reported on studies of such areas in France, Finland, Germany, England, the United States, Switzerland, the Netherlands, Belgium, and other countries, using such a variety of functional indicators of urban influence as milk-shed zone, bus service routing, newspaper circulation, use of recreational facilities, administrative services, medical services, and educational facilities.[34]

In areas with relatively few private vehicles, analysis of the routes and frequency of bus service, without reference to journey time, is a good indicator of functional interdependence. This technique was used by F. H. W. Green in England and Wales and deserves special mention because of its relevance to the present study. Since ownership of automobiles is still considered a luxury in Brazil, residents of outlying areas rely primarily on bus service to get from rural and rurban communities to urban and metropolitan centers. Green's study argued that a transportation index can be a good indicator of primary economic integration of villages and towns with larger cities, because villages and towns often serve as labor pools for industrial centers and the daily trip to work is reflected in transportation schedules.[35] In Brazil, bus transportation provides commuter service within the metropolitan core, and perhaps within the primary community area, but in the secondary and tertiary areas it is rather an indicator of trade zones.

The metropolitan community, a relatively recent phenomenon, can be better understood when territorial concepts such as community area

and natural area are applied to it. Delineating the influence area is useful for determining the true limits of social interaction and the interdependence of outlying localities with the nucleus and for avoiding the distortion created by using administrative or demographic density units. Roderick D. McKenzie recognized the influence of metropolises over wide tributary areas. He noted that "with the increasing ease and rapidity of travel, particularly by motor car, the large city has not only brought under its sway much territory that was formerly rural, but has extended its influence far out into territory that is still classified as rural."[36] This influence brings about a metropolitan consciousness which integrates formerly isolated and independent rural neighborhoods and communities.[37] McKenzie outlined several techniques for finding the margins of the metropolitan community: (1) describing the commutation area, (2) describing the trade (or service) area, and (3) analyzing truck transport patterns.[38] He also mentioned other indices, such as newspaper delivery by carriers and utilities expansion, primarily as integrative features of the core area rather than the metropolitan community.

Park and Newcomb, in a study contemporary with McKenzie's, held that the total distribution pattern of a newspaper correlates with economic and social features, such as wholesale trade zone and the sale of rail passenger tickets.[39] Green advocated the compilation of a variety of indicators, which he used in the cited study to show that Connecticut is functionally a part of New York's metropolitan community, rather than Boston's, and functionally divorced from its historical region, New England.[40] Haglund, in a study of Milwaukee, used commutation

area, retail trade zone, newspaper circulation, wholesale grocery distribution zone, the drawing area of the Milwaukee Braves baseball team, and thirty-seven other criteria for delimiting the territorial extent of metropolitan influence.[41] His study showed wide variation among these criteria. Bollens and Schmandt have argued that the precise criteria are not the central issue in making a meaningful delimitation, but the larger theoretical approaches to interpretations of metropolitan growth are central to such a determination. These authors were eclectic in crediting methods, including Haglund's (and others') "function-by-function" compilation. Bollens and Schmandt, however, argued that the view of the spatial pattern as uni-centered is the basic weakness of such approaches. Citing Hawley, they pointed out:

> Modern forms of communication and transportation have brought into being a sharply etched multi-centered community pattern. Formerly, semi-independent communities scattered over the hinterland about a market center were drawn into close contact with one another as well as with the major center, differentiated as to function, and transformed into units in an extensive though highly sensitive local territorial division of labor.[42]

They concluded that the concept of metropolitan community as a multi-centered phenomenon is meaningful and realistic.

Brazilian authors have been concerned with metropolitan growth and the delimitation of metropolitan community areas. Several studies of Brazilian urbanization have attempted to map areas of influence, but the empirical basis of these studies is unclear. There is a general discussion of transportation, communications, industrial and commercial attraction and influence, population size and historical ties, but the tracing of empirically defined trade zones, newspaper circulation, and

other such socio-economic factors is lacking in these studies.[43]

Thus, from this review of the literature on delineating and identifying locality groups we can see a need for a comprehensive study of a multi-centered metropolitan community system, taking into account the whole range of locality groups from rural to metropolitan. Furthermore it is clear that an empirically based study will be a contribution to the literature on Brazilian metropolitan phenomena.

Levels and Degrees of Integration among Locality Groups

The importance of identifying and delineating locality groups depends on the interrelationships among them. It is clear that many of the community types discussed exist entirely within a larger community. As Smith indicated, any individual farm family may have loyalties, attachments, and linkages to a number of different communities: rural, rurban, urban, and metropolitan.[44] These different attachments are in fact a form of integration of the family in the "level" of community. Of course, the degrees of integration at various levels are important for determining the nature of a society and culture. For example, in a simple society the integration into high levels will be minimal, whereas in a highly complex society the integration at higher levels will be greater. Since the process of modernization is linked to the promulgation of modern attitudes and since innovations are often generated from metropolitan centers, it is clear that the understanding of levels and degrees of integration among locality groups is crucial to informed planning, as well as to academic understanding of how a particular society functions.

The literature on levels and degrees of integration is limited. Galpin was an early observer of the fact that rural residents relate themselves to different centers for different purposes. Furthermore he predicted that intense competition among rural trade centers would, with the advent of good roads and the wide use of automobiles, result in the integration of farmers and their families with the nucleus of a more complex level of locality group, the rurban or farmer's town.[45]

A later study in Louisiana by T. Lynn Smith showed that over time, centers of various sizes tend to become more evenly distributed throughout an area, resulting in more efficient rural organization connecting each family with a number of trade centers.[46] In subsequent works, Smith has continued to give the concept of the level and degree of integration among locality groups a central role in his analysis of social differentiation in rural societies.[47]

Smith's findings have been supported by other sociologists, including Dwight Sanderson, whose study of seven New York counties indicated that the open country farm family was at that time (1934) primarily integrated with the local village but also with other locality groups, especially to obtain certain specialized services.[48]

More recent sociological research by Zimmerman and Moneo has shown that the involvement of rural residents in the life styles of villages and towns has changed over time. A major change, they explained, has been that the lower-level communities gain in significance of degree of integration at the expense of both rural neighborhood and city as ease of transportation and communication increases.[49] The literature from other disciplines is notably sparse. Anthropologist

Robert Redfield devoted a full chapter to integration phenomena, but unfortunately, Redfield never devised a satisfactory method for studying the phenomena, although he articulated related concepts with some clarity.[50]

Anthropologists who have studied Brazilian communities have commented on the integration of larger entities with these communities, but this integration has rarely been a major focus of their analyses. Charles Wagley pointed out that the community is a "specialized unit of a larger and more complex social system."[51] He added that there are social groups cutting across communities that bind these groups to a larger regional or national society, but that it is "important to have an integrated picture of a culture as it functions in a particular community."[52]

Robert Shirley is one of a few anthropologists who have treated the problem of integration among different levels of locality groups, especially the influence of a metropolis on outlying communities. In a re-study of the formerly isolated rural community of Cunha, he brought out the fact that rapid changes in attitudes, life styles, and levels of living are due almost directly to the integration of residents of small communities with the metropolitan community.[53] He insisted that the metropolis plays a central role in rural change, and he pointed out that integration of rural areas with national (i.e., metropolitan) concerns is an irreversible trend in Brazil. Indeed, recent data support the contention that Brazilian society is no longer primarily integrated on the level of the rural neighborhood and is becoming a less segmented, homogenized society.[54] The present study adds additional data to support this statement.

The organization of the data presented in this study follows in its greater part the frame of reference designed by T. Lynn Smith: the identification of various types of locality groups and their socio-ecological integration within a metropolitan community system.

NOTES

1. T. Lynn Smith, "Some Aspects of Rural Community Development in Brazil," *Luso-Brazilian Review*, X:1, (June) 1973, pp. 5-6.

2. See Margaret Stacey, "The Myth of Community Studies," *British Journal of Sociology*, XX:2, (June) 1969, p. 135.

3. Charles H. Cooley, *Social Organization* (New York: Charles Scribner's Sons, 1909). Cooley did not use the word *secondary*, but he indicated that *primary* was used in contrast with another class of groups that have since come to known as *secondary*.

4. Emile Durkheim, *The Division of Labor*, trans. by G. Simpson (Glencoe, Ill.: The Free Press, 1947), p. 131.

5. Cooley, p. 23.

6. Robert M. MacIver, *Society: Its Structure and Changes* (New York: R. Long and R. R. Smith, Inc., 1931), p. 9.

7. T. Lynn Smith, *The Sociology of Rural Life*, 3rd ed. (New York: Harper & Brothers, 1953), p. 378.

8. Charles J. Galpin, *The Social Anatomy of an Agricultural Community*, Wisconsin AES Bulletin 34 (Madison: University of Wisconsin, 1915).

9. Robert E. Park and Ernest W. Burgess, *The City* (Chicago: University of Chicago Press, 1925).

10. Roderick D. McKenzie, "The Rise of Metropolitan Communities," in *Recent Social Trends: Report of the President's Research Committee on Social Trends, I* (New York: McGraw-Hill, 1933), 443-96.

11. For discussion of this taxonomy see T. Lynn Smith, *La sociología y el proceso de desarrollo de la comunidad*, Technical documents, UP series H/VII, 20.2 (Washington: Pan American Union, (March) 1964), pp. 1-8; T. Lynn Smith, *Colombia: Social Structure and the Process of Development* (Gainesville: University of Florida Press, 1967), pp. 295-99; T. Lynn Smith, "Some Aspects," pp. 6-7; T. Lynn Smith and Paul G. Zopf, Jr., *Principles of Inductive Rural Sociology* (Philadelphia: F. A. Davis Co., 1970), pp. 260-62.

12. Charles J. Galpin, *Rural Life* (New York: D. Appleton-Century Co., 1918), p. 97.

13. Robert E. Park, *Human Communities* (Glencoe, Ill.: The Free Press, 1952).

14. Smith, *Colombia*, p. 289.

15. P. A. Sorokin, Carle C. Zimmerman, and Charles J. Galpin, *A Systematic Source Book in Rural Sociology*, 3 vols. (Minneapolis: University of Minnesota Press, 1930-1932), I:307-8.

16. T. Lynn Smith, *Brazil: People and Institutions*, 4th ed. (Baton Rouge: Louisiana State University Press, 1972), pp. 430-31.

17. Smith, *Brazil*, pp. 430-31.

18. James M. Williams, *Our Rural Heritage* (New York: Alfred A. Knopf, Inc., 1925), p. 21.

19. John H. Kolb, *Rural Primary Groups*, Wisconsin AES Bulletin 51 (Madison: University of Wisconsin, 1921).

20. Carle C. Zimmerman and Carl C. Taylor, *Rural Organization: A Study of Primary Groups in Wake County, North Carolina*, North Carolina AES Bulletin 245 (Raleigh: North Carolina State College, 1922).

21. Paul J. Jehlik and J. Edwin Losey, *Rural Social Organization in Henry County, Indiana*, AES Bulletin 568 (Lafayette, Ind.: 1951); Paul J. Jehlik and Ray E. Wakely, *Rural Organization in Process: A Case Study of Hamilton County, Iowa*, Iowa AES Bulletin 365 (Ames: Iowa State College, 1955); John H. Kolb, *Emerging Rural Communities* (Madison: University of Wisconsin Press, 1959).

22. Orlando Fals-Borda, "Saucío: A Sociological Study of a Rural Community in Columbia," Master's thesis (Minneapolis: University of Minnesota, (June) 1952); materials incorporated in *Peasant Society in the Colombian Andes: A Sociological Study of Saucío* (Gainesville: University of Florida Press, 1955).

23. Ernesto E. Vautier and Orlando Fals-Borda, *La vereda de Chambimbal: Estudio y accion en vivienda rural* (Centro Interamericano de Vivienda y Planeamiento, 1958).

24. Smith, *Brazil*, pp. 445-46.

25. Amos H. Hawley, *Human Ecology: A Theory of Community Structure* (New York: The Ronald Press Co., 1950), p. 256.

26. Galpin, *Social Anatomy*, pp. 18-19.

27. Irwin T. Sanders and Douglas Ensminger, *Alabama Rural Communities: A Study of Chilton County*, Alabama College Bulletin 136 (Montevallo: 1940).

28. Norman W. Painter, "The Ecological Basis of Social Systems in Turrialba," in C. P. Loomis, J. D. Morales, R. A. Clifford, and O. E. Leonard (eds.), *Turrialba: Social Systems and the Introduction of Change* Glencoe, Ill.: The Free Press, 1953), ch. VI.

29. John V. D. Saunders, "Delineation of a Florida County-Seat Community," *Rural Sociology*, 21:2 (1956), pp. 1-2.

30. Smith, "Some Aspects," p. 13.

31. Charles J. Galpin, cited by T. Lynn Smith, "The Locality Group Structure of Brazil," *American Sociological Review*, IX:1 (1944), pp. 43-44.

32. Smith, *Colombia*, p. 309; T. Lynn Smith, *Studies of Latin-American Societies* (New York: Doubleday-Anchor, 1970), p. 156.

33. Chauncy D. Harris, *Salt Lake City: A Regional Capital*, Doctoral dissertation (Chicago: University of Chicago, 1941); Edward L. Ullman, *Mobile: Industrial Seaport and Trade Center*, Doctoral dissertation (Chicago: University of Chicago, 1943); Robert E. Dickinson, *The City Region in Western Europe* (London: Routledge and Kegan Paul, Ltd., 1967); F. H. W. Green, "Urban Hinterlands in England and Wales: An Analysis of Bus Services," *Geographical Journal*, 116(1-3):64-81 (1950).

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37. McKenzie, *On Human Ecology*, p. 259.

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46. T. Lynn Smith, *Farm Trade Centers in Louisiana, 1901-1931*, Louisiana AES Bulletin 234 (Baton Rouge: Louisiana State University, 1933), pp. 54-55.

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48. Dwight Sanderson, *Rural Social and Economic Areas in Central New York*, Cornell AES Bulletin 614 (Ithaca, N.Y.: 1934), p. 95.

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51. Charles Wagley, *Amazon Town* (New York: Alfred A. Knopf, 1953), p. 261.

52. Wagley, *Amazon Town*, p. 261.

53. Robert Shirley, *The End of a Tradition: Cultural Change and Development in the* Município *of Cunha, São Paulo, Brazil* (New York: Columbia University Press, 1971), p. 254.

54. Smith, *Brazil*, pp. 691-92.

PART II

METROPOLITAN COMMUNITY SYSTEM

Chapter 3

Evolution of the Metropolitan Community System of Belo Horizonte

The present metropolitan community system of Belo Horizonte is less than a quarter of a century old. The dominance of Belo Horizonte came about when the metropolis, capital of the state of Minas Gerais, began to assume the role of socio-economic integrator of wide parts of its administrative territory, which previously had been either isolated and little integrated within the local and with the national society or more influenced by two older and larger Brazilian metropolises, Rio de Janeiro and São Paulo.

The area involved in this metropolitan community is part of the Eastern Highlands of Brazil. This inland area is characterized by hilly uplands dominated by the Serra de Espinhaço, a mountain range that runs through the center of Minas Gerais into the neighboring state of Bahia. Due to the kind of rock formations and topography, only a few parts of this region are suited to large-scale agriculture. The northern portion that has a terrain suitable for large farming operations lacks enough rainfall for such farming. Many landowners have turned to stock-raising as an economically viable activity given the climate. Luckily, however, this mountainous region is the site of major deposits of iron, limestone, and non-ferrous metals. High-grade iron ore, the economically most important of these resources, exists

in vast quantities and is the basis of a rapidly developing iron and steel industry, which has resulted in an influx of population and a growing urban-industrial development in the metropolitan community.

Changing Social Forms In the Metropolitan Community of Belo Horizonte

The area occupied by the metropolitan community of Belo Horizonte has assumed two major social forms in the past and is now well into the third. The first, that of initial formation, lasted about a century, from the first settlement in the 1690s until a decline in gold and diamond mining at the beginning of the nineteenth century. The second, from the early 1800s to the beginning of the Second World War, was a period of economic decline of mining centers and of dispersion of population into isolated farms and villages in peripheral areas suited to farming and agro-pastoral activites. During this second period, near the end of the nineteenth century, the planned capital city of Minas Gerais was established at Belo Horizonte, but for some time it remained a small provincial town with little socio-economic influence beyond a few neighboring satellite villages and open country farms. The third phase, commencing during the Second World War and continuing to the present, has been a period of the formation of the metropolitan community of Belo Horizonte, aided by the growing use of automobile and truck transport and the advent of hard-surfaced highways connecting the metropolis to many formerly isolated communities.

The Period of Initial Settlement

During the first period, 1690-1810, the region was settled as a result of exploratory expeditions from earlier developed population

centers in Bahia and São Paulo.[1] Travelers from coastal ports used river and arduous overland pack transportation to arrive at settlements on sites of scattered deposits of precious metals and stones. The economic base of these settlements was limited to the extraction of gold and diamonds. Widely dispersed mining sites formed the nuclei of settlements in the mountain regions of central Minas Gerais, especially along two rivers, the Rio das Mortes in the south and the Rio das Velhas, near the present site of Belo Horizonte.

These settlements were urban in character and economy, with a full-time specialized mining labor force dependent on a well-developed agricultural sector geared to the production of food crops for consumption in the mining towns.[2] From the beginning the riches of the region were exported from Brazil to Portugal, and most non-food goods originated outside of the mining region. There was little contact among the mining towns of this period, partly because of relative physical isolation and partly becuase of the absence of any symbiotic interdependence among these towns. Each town sent its product directly by river, or overland, to port cities and received supplies from the outside. During this hundred-and-twenty-year period many of these towns, now part of the metropolitan community of Belo Horizonte, were established, but there is no evidence of the existence of networks of mutual ties. As boomtowns, some of the mining settlements had larger populations in the eighteenth century than today.

Decline of Mining Settlements and Dispersion of Population

During the second period, 1810-1940, the mining region of Minas Gerais experienced economic and demographic decline in the towns and

dispersion of the population into isolated farms and rural villages, which served as religious, administrative, and service centers for a limited hinterland. The population was dispersed in the countryside, and rural residents made only periodic visits to the villages. Many of the houses in these villages were owned by *fazendeiros*, rural landowners, and were unoccupied except on holidays and at other times of celebration. The permanent populations of the villages were small, consisting of shopkeepers, tradesmen, the clergy, and the poor.[3] Some of the population from the declining mining region migrated to the southern and eastern zones (Zona Sul and Zona da Mata) of Minas Gerais, where export economies developed from the production of coffee and also of cattle, hides, cotton, and sugar. The first large city in Minas Gerais, Juiz de Fora, developed during this period because of the diversified investments of coffee barons and the opening of road and rail connections in the 1860s and 1870s to the port and consumption market of Rio de Janeiro.[4]

The creation of the Brazilian republic in 1889 magnified the importance of state governments and state politicians, who became interested in developing and integrating states as territorial entities. Toward this end, many political leaders in Minas Gerais, despite opposition from traditional interests, favored moving the state capital from Ouro Preto, the colonial mining capital, because it lacked the topographic requisites for physical expansion, which state leaders felt was imminent. The final selection of a site for the new capital resulted from a compromise among three contending and already established cities: Juiz de Fora, Barbacena, and São João del Rei. A totally new city,

later named Belo Horizonte, was planned on a site chosen for healthful climate; availability of water supply; suitable topography, with a wide area for building and expansion; natural beauty; and central location in the state.[5] The possibility of opening rail links to the capital allowed it to be located closer to the center of the state, lessening the degree of isolation that had kept Ouro Preto from developing into a populous, influential center.

As the city of Belo Horizonte was established and began to grow as an administrative center, São Paulo and Rio de Janeiro experienced a burgeoning economic growth during the First World War, when decline in international trade favored domestic industries. At this time the influence of Rio de Janeiro was extended into the Zona da Mata, and the influence of Sao Paulo into the Zona Sul, primarily because of road and railroad building.

After the war the mining region near Belo Horizonte experienced a change in the pattern of population distribution, because of investments by foreign steel companies in various mines, processing plants, and company towns, such as Sabará, Itabira, and João Monlevade. The rural community areas surrounding the villages that had developed in the mining region during the previous century lost some population to the company towns, because of the attraction and security of industrial jobs and company benefits. Foreign companies, however, were more interested in exporting semi-processed ore or pig iron than in investing in ambitious steel mills, since domestic consumption of steel in Brazil was still low. Furthermore, the country lacked the quality and quantity of coal necessary for steel production, and the simple processing plants

that were set up had to rely on expensive imported coal or locally produced charcoal. Thus, despite great expectations for making Minas Gerais the steel capital of Latin America, the iron industry remained at a fairly static rate of production, with a low level of employment, throughout the 1930s and 1940s.[6]

Therefore, in spite of the devleopment of these small urban industrial centers, the dominant settlement pattern throughout the region during the second period was a dispersed arrangement of homogeneous, unintegrated, nearly self-sufficient rural communities. With the possible exception of Juiz de Fora, there were no urban centers of significant influence to rival the increased penetration into the state by the influence areas of Rio de Janeiro and São Paulo.

Emergence of the Metropolitan Community

The third period, 1940 to the present, has been characterized by growth of differentiation and interdependence among the communities of Minas Gerais, and this growth culminated with the emergence of Belo Horizonte as the center of a metropolitan community system. The decline in international trade that accompanied the Second World War gave an impetus to the establishment of industry in Belo Horizonte and its environs. An industrial park was established on the western outskirts of the city and achieved a certain degree of success, only to suffer a decline after the end of the war. Nevertheless, the park has survived and has added to the functional diversity of Belo Horizonte, which had previously been limited to a primarily administrative function.

After a period of relative stagnation, political initiatives led to critical programs of investment in highways that effectively

linked Belo Horizonte to most parts of Minas Gerais. Prior to 1955 the only paved intercity highway was from Rio de Janeiro to Juiz de Fora, a total of 108 miles, of which on 26 miles were within the state. By 1957 a massive highway program had begun with the expressed policy of linking Belo Horizonte to the outlying portions of the state: Governador Valadares in the east, the Triángulo panhandle in the west, the Zona da Mata in the southeast, and the Zona Sul in the southwest. Unpaved roads had existed since the nineteenth century, but these roads were generally in poor condition and impassable at certain times of the year.

The 1957 road improvement program coincided with the construction of Brasília. Since building this national capital required massive movement of personnel, equipment, and materials, the road to Brasília became a prerequisite for the venture. During the same period Brazilian-based factories began to manufacture all types of motor vehicles, making them more available and less expensive, thus reducing the time and cost of traveling between various centers.

Throughout the 1950s and 1960s, Belo Horizonte experienced intense urbanization, population growth, influx of rural migrants, and functional diversification. During the post-war period the city's population reached 250,000, the projected population size of the original urban plan, and by 1972 it was almost six times that size (1.4 million). At the same time it became increasingly multi-functional through industrial expansion, increased tourism, and the growth of specialized institutions. In the commercial sector, wholesale distribution of manufactured and agricultural products increased. The traditional administrative functions of government diversified with the founding of universities,

hospitals, and agencies concerned with social welfare (such as social security and health insurance).

Concurrently, the metropolitan community system was forming, as small cities became satellites of the metropolis or, if remote, became sub-centers that integrated surrounding towns and villages into their community areas. Since land use in the central city was primarily devoted to governmental functions, the new suburbs, such as Contagem, became industrial centers integrated with the central city through contiguous settlement and frequent bus service. More distant cities located on major transportation routes were becoming regional sub-centers and also grew in both population size and functional diversity, e.g., Divinópolis and Governador Valadares. Other, more isolated centers grew to become trade and service cities by expanding their contacts with additional small towns and villages in the rural areas, e.g., Curvelo, Campo Belo, and Formiga.

Today, important changes are taking place in the marketing territories of cities within the metropolitan community system. The links these cities have with the metropolis allow these cities to perform the intermediate stage in distribution of products and services. In addition, transportation systems are now sufficiently advanced to allow the products of agricultural areas to be marketed in the metropolis and other urban centers where demand is high. The milk shed of Belo Horizonte, for example, radiates 100 miles from the city, with deliveries daily from rural areas to pasteurizing plants in the city. Whereas previously most agricultural produce was trucked in from São Paulo, where large-scale commercial agriculture and warehousing

facilities had competed for markets in Minas Gerais, within the last five years the agricultural area around Belo Horizonte has begun to supply many of the city's needs.

Delineating the Metropolitan Community

As happened in the United States in the 1930s,[7] the administrators of metropolitan agencies in Belo Horizonte have become interested in determining the influence area of the metropolis for commercial, administrative, and institutional purposes. The *município* government has set up an agency, SUDECAP (Superintendência de Capital),[8] to deal with the area within the boundary of the município of Belo Horizonte. The agency has been concerned with varied planning operations, such as agricultural warehousing facilities, zoning regulations, street building and improvement, water and sewage systems, lighting, and other urban facilities. In order to plan for future growth of the urban core, the delineation of a metropolitan influence area, using the agricultural supply zone, has been completed by SUDECAP. Another agency, PLAMBEL (Plano Metropolitano de Belo Horizonte),[9] limits itself to the fifteen municípios that form the metropolitan area and has concerned itself with broad plans and projections for industrial development and population growth for the satellite area, in an effort to predetermine directions of change. PLAMBEL originally made studies of metropolitan influences in this area in order to determine the municípios which have most intense interaction with Belo Horizonte and which, therefore, should be included in the planning area.

National and state agencies including IBGE (Instituto Brasileiro de Geografia e Estatística)[10] and CEDEPLAR (Centro de Desenvolvimento

e Planejamento Regional da Universidade Federal de Minas Gerais)[11] have delineated the boundaries separating the influence areas of Brazil's three major metropolises, São Paulo, Rio de Janeiro, and Belo Horizonte. These boundaries and those of subordinate communities are determined by one or more of the following economic and social indicators of community interaction: volume of telephone calls, letters, and telegrams; cargo and passenger transport; and wholesale goods distribution (by origin and destination); number of secondary school students and hospital patients (by origin); amount of federal and state investments (by location); and number of state and federal employees (by location).

Much of this macroscopic data has been used by the author to supplement data on the milk shed, the food supply area, the newspaper circulation zone, the radio service area, and other patronage areas used for the composite metropolitan community delineation shown in Figure 1. Also shown on this map are the jurisdictional zones of two agencies, the state government's CODEVALE (Companhia de Desenvolvimento do Vale do Jequitinhonha)[12] and the federal government's SUDENE (Superintendência de Desenvolvimento do Nordeste),[13] which fall within the influence area of Belo Horizonte as shown on the map.

CODEVALE is a specialized agency formed to aid the economically least developed and least populous portion of the state of Minas Gerais, the valley of the Jequetinhonha river. It has been largely concerned with bringing electricity, roads, and industry into the area. This development program is bringing about the more intense integration of this very isolated area with the metropolis and the rest of the area of the community. Simlarly, SUDENE has offered incentives for development

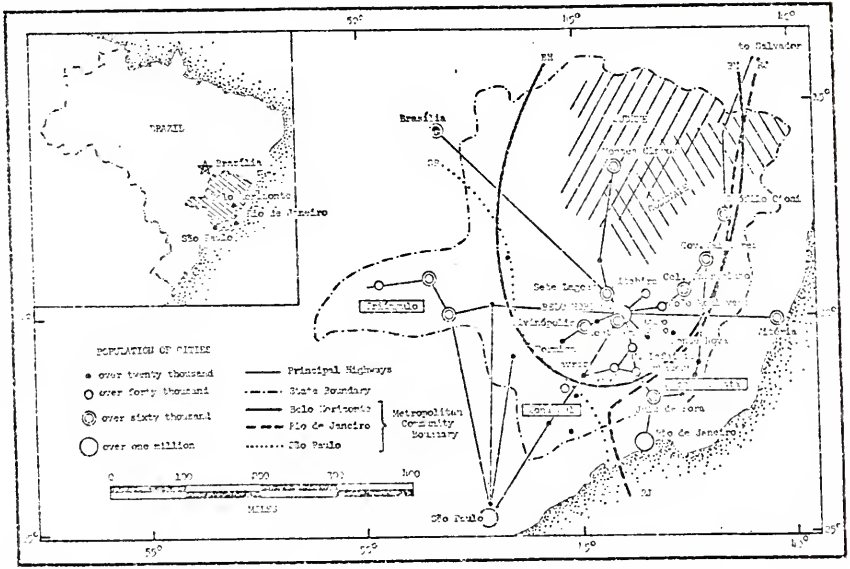

Figure 1. Competing metropolitan community areas in the state of Minas Gerais

in its jurisdictional area, part of which is within the region under study. (SUDENE's activities encompass portions of many states in the northeastern region of Brasil.) Through financial incentives such as tax write-offs and technical assistance, SUDENE has encouraged much investment in northern Minas Gerais, especially in the largest city within its jurisdiction, Montes Claros, where foreign and other out-of-state investments have been attracted by incentive programs. As a result, this region is becoming economically more integrated with the national economy via institutions in the metropolis of Belo Horizonte. Figure 1 also shows the relative location of the metropolitan community system within Brazil as a whole.

Classification and Integration of Locality Groups In the Metropolitan Community

The present study of locality groups within the metropolitan community of Belo Horizonte has given the author sufficient data to make the present classification of locality groups found in this community and to describe the integration among different classificatory categories, or levels. T. Lynn Smith has given the most universal classification scheme (see Chapter 2). This useful scheme has been elaborated by distinguishing certain sub-types of Smith's categories, reflecting the specific qualities of Brazilian locality groups in the region studied.

Three sub-types of rural neighborhoods, two sub-types of incomplete communities, and three sub-types of urban communties were found; these sub-types are described and discussed in subsequent chapters. A complete list of locality groups under discussion follows.

Types of Locality Groups	Sub-Types Distinguished
Farm family	
Rural neighborhood	*Fazenda*-type Nucleated-farm-type Scattered-farm-type
Incomplete community	Hamlet-type Village-type
Rural community	
Rurban community	
Urban community	Factory-city-centered Trade-and-service-city-centered Multi-functional-city-centered
Metropolitan community	

Although all of the subordinate types of locality groups listed exist within the metropolitan community, it is not always the case that all lower-level types are found within each level. For example, some urban communities have rurban communities within their limits, but others do not.

The present study is also addressed to the description and analysis of the changing significance of various levels of ecological integration among locality groups. Whereas previously the most significant level of integration for rural residents was the rural neighborhood, the advent of rapid transportation and communication has brought the rural resident into greater and more intense contact with rural and urban communities and into infrequent but important interaction with urban centers where specialized goods and services are obtained.

The following chapters, therefore, show how the changing ecological structure of the metropolitan community of Belo Horizonte reflects a higher degree of differentiation within the same set of locality groups previously distinguished and how that higher degree of differentiation results in the integration of rural residents with higher levels of locality groups.

NOTES

1. Cf. R. Boxer, *The Golden Age of Brazil, 1695-1750* (Berkeley: University of California Press, 1964), p. 35; Caio Prado, Junior, *The Colonial Background of Modern Brazil*, trans. by Suzette Macedo (Berkeley: University of California Press, 1969), p. 198. Dates cited for periodization are approximate.

2. Prado, *Colonial Background*, p. 187.

3. T. Lynn Smith, *Brazil: People and Institutions*, 4th ed. (Baton Rouge: Louisiana State University Press, 1972), p. 428.

4. Fernando Correa Dias, *A imagem de Minas* (Belo Horizonte: Imprensa Oficial, 1948), p. 8.

5. Nelson Coelho Senna, *O ciquentenario de Belo Horizonte* (Belo Horizonte: Imprensa Oficial, 1948), p. 8.

6. Rollie E. Poppino, *Brazil: The Land and the People* (New York: Oxford University Press, 1968), pp. 248-52.

7. Roderick D. McKenzie, *On Human Ecology* (Chicago: University of Chicago Press, 1968), pp. 255-60.

8. Superintendency of the Capital (author's translation).

9. Metropolitan Plan for Belo Horizonte (author's translation).

10. Brazilian Institute for Geography and Statistics (author's translation).

11. Center of Regional Planning and Economic Development of the Federal University of Minas Gerais (author's translation).

12. Development Company of the Jequetinhonha River Valley (author's translation).

13. Superintendency of Northeastern Development (author's translation).

PART III

LEVELS OF LOCALITY GROUPS
THEIR INTEGRATION WITHIN THE METROPOLITAN COMMUNITY

Chapter 4

Varieties of Rural Neighborhoods

In this chapter the rural neighborhood is discussed as one classification of locality group. After definition of the concept of rural neighborhood, traditional rural neighborhoods from the state of Minas Gerais in Brazil are described. Discussion of this older form of rural neighborhood is followed by evidence to show that today the process of community integration of neighborhoods, especially in areas where a metropolitan community system is in a state of formation, has changed internal structures and behavior patterns while it has increased functional relationships between the neighborhoods and the larger society. Three types of rural neighborhoods found in the metropolitan community of Belo Horizonte are defined, and case studies of each type are presented in order to show the nature and extent of changes in social and ecological structure of these locality groups, the processes of social interaction within them, and the material culture of their residents. A discussion of the criteria for selection of in-depth case studies and an overview of the data collection techniques precedes the presentation of the materials on types of neighborhoods. However, discussion of the integration of rural neighborhoods with higher levels of locality groups and the larger society is dealt with in later chapters.

The Rural Neighborhood

The *rural neighborhood* is a territorial area where residents interact with high frequency in face-to-face relationships and where the primary economic activity is agricultural and/or pastoral. There is in such a locality an intense territorial consciousness, to be measured by the sense of belonging that residents express about the territory and by the fact that outsiders identify residents with that territory. The rural neighborhood contains a limited number of shared institutions that are patronized by residents, but these are not the complete spectrum of institutions necessary for a full or complete social life. Residents often live on the land they work, and consequently a low population density occurs with this type of locality group.

In Europe and some Spanish-American countries, farm families and agricultural workers generally live in nucleated settlements, such as hamlets, villages, or towns, apart from the land they work.[1] But in Brazil and the United States, the dispersed rural neighborhood, consisting of scattered farmsteads, has been the basic unit of social integration in the agricultural portions of these countries. The general type of rural neighborhood in Brazil, prior to the 1950s, has been characterized as being highly integrated within itself, consisting of a small number of families living on farms situated close together and having an informal system of mutual aid based on common interests, kinship, and common institutions.[2] A basic distinction between types of rural neighborhoods in Brazil has traditionally been made between neighborhoods of peasant smallholders and those of workers on medium- and large-scale farms.[3] Changes in this traditional typology are illustrated in type descriptions and

case studies.

The traditional rural neighborhoods of Minas Gerais were influenced by the fact of highly irregular terrain, especially in the areas of initial settlement, that created difficulties in transportation and communication, because of the necessity of overcoming natural barriers under the limitations of simple technology. Traditionally, the majority of holdings were large, but after the abolition of slavery, groups of small-holders were attached to marginal lands near large holdings, forming isolated neighborhoods of farmers living on small pieces of land, which furnished a pool of laborers and sharecroppers to large proprietors. In southern Minas Gerais large landholdings have become relatively rare, primarily because of the breaking up of estates through inheritance, but many other sections of Minas Gerais still show a mixture of small, medium, and large landholdings.

Three major types of rural neighborhoods are found in the metropolitan community of Belo Horizonte: the *fazenda* neighborhood; the nucleated, small-farm neighborhood; and the scattered farmstead, small-farm neighborhood. The traditional distinction between neighborhoods of workers and those of peasants seems to be less useful here, since in the present study most small-holders interviewed also worked seasonally as day laborers on medium- and large-scale farms. Furthermore, workers who had previously been full-time laborers on medium- and large-scale farms were also involved in subsistence production, because of the breakdown of close patron-client ties with the *fazendeiros*, the owners of large farms. Thus, neighborhood types seem to be best classified by a combination of size of holding and settlement pattern criteria rather

than by designation of worker and peasant.

The three types of neighborhoods have responded in slightly different ways to the growing influence of social change, largely emerging from the metropolitan center. The technological obstacles to rapid transportation and communication are increasingly being surmounted, decreasing the isolation of rural settlements, bringing in outside expectations, facilitating the outward migration of the rural population, and breaking down some of the traditional institutions of mutual aid. The fazenda neighborhood has been most influenced by the breakdown of patron-client relationships due to an exodus from the land of many fazendeiros and workers. The nucleated, small-farm neighborhood and the scattered farmstead, small-farm neighborhood have been most influenced by the increasing entrance of small-holders into the market economy, turning from a dependence on subsistence production to a reliance on cash crops, although the Brazilian small-farmer has never been totally isolated from the market economy, since he has traditionally sold surpluses to obtain specialized goods. In addition, many of these neighborhoods now have access to the institutions of trade and service centers of various sizes, with improved road systems allowing for better bus and milk truck service. This access has changed the material culture of these neighborhoods and has brought residents into a milieu characterized by varieties of functional relationships. These generalizations about the characteristics and the changes in rural neighborhoods are more fully developed as various types are reviewed in more detail and as case studies are presented.

Selection and Delineation of Rural Neighborhoods

The author visited fourteen rural neighborhoods in eight *municípios* near the limits of the influence area of the metropolitan community of Belo Horizonte, in several different regions characterized by different kinds of economic activities in addition to agro-pastoral ones: a cross-section of the rural neighborhoods of the metropolitan community. Since rural residents are often suspicious of outsiders' intentions, the author chose municípios in which he had extensive contacts to facilitate data gathering. In some instances several rural neighborhoods within a single rural community were studied in order to obtain data on the relationship among neighborhoods and with their community center.

Among the three regions from which the rural neighborhoods selected for study were chosen, there is variation in the areas of (1) topography and climate, (2) relative importance of various economic activities, (3) demographic density, (4) size of holdings, (5) quality and quantity of paved highways, and (6) proximity of neighborhoods to nucleated settlements of various types.

The Campos da Mantiqueira region is the most hilly and high in altitude, with a moist climate; best suited of the three for mixed agro-pastoral activity. The most important extractive industries in the region are based on an abundance of limestone, making lime, cement, and stone-masonry industries significant. The area has high demographic density, settled early in the colonial period, with small and medium-size farms prevalent. There is an extensive network of paved highways connecting the region with Rio de Janeiro, São Paulo, and Belo Horizonte.

In the general area are numerous rural, rurban, and urban community centers of various types, which are so densely spaced as to be available to residents of most rural neighborhoods. In this region, four municípios contain rural neighborhoods selected for study; these municípios are Barbacena, Barroso, São João del Rei, and Resende Costa.

In the region of the Alto São Francisco the land is characterized by a relatively flat terrain, with semi-arid climate; more suited to pastoral than to agricultural activities, except for areas near rivers or other sources of water. No extractive or industrial activities of large scale were found, except for the production of charcoal, which is trucked to the steel region near Belo Horizonte. The area has low demographic density and relative large-scale holdings. The recently opened artery to Brasília is one of the few paved highways in the region, but there are basically well-maintained dirt roads throughout the area. There are no large urban centers, and the rural trade and service centers are widely spaced. Because of its large administrative territory, in this region Pompeu is the only município from which rural neighborhoods were selected.

The Siderúgica region has an irregular terrain but is lower in altitude than the Campos da Mantiqueira. The climate is suitable for both agricultural and pastoral activity. The region is an important center for the extraction of iron ore and for the processing of steel, which depends upon the production of coal. The demographic density has sharply increased in the last two decades, due to the iron industry, but rural areas have lost population to mining and industrial towns. There is a mixture of small, medium, and large holdings. The number of

paved roads is increasing to support the iron industry, although their quality and quantity are inferior to roads in the Campos da Mantiqueira region. There are a number of specialized mining and industrial cities as well as traditional rural trade and service centers, but the former do not tend to serve the rural residents as do the multi-functional cities of the Campos da Mantiqueira. Three of the municípios of this region contain rural neighborhoods selected for this study; these municípios are São Domingos do Prata, Dionésio, and Dom Silvério (see Figure 2).

The socio-ecological boundaries of each neighborhood studied are based on interviews with residents supplemented by direct observation. Official maps of the municípios, obtained either from the Departamento de Geo-Ciências in Belo Horizonte or directly from the local government, often showed the principal roads, rivers, and streams; names and locations of important settlements; and, in some instances, locations of schools and chapels. Upon entering the locality, the author, with the help of informants, drew working maps of the area, locating the approximate positions of houses, schools, chapels, stores, roads, trails, and streams. Residents were interviewed to determine the name of the place where they lived, where their children went to school, where they worked, where they attended church, where informal visits were made, and where they made purchases and/or obtained services. From an analysis of these data, lines were drawn around certain clusters of houses to indicate the boundaries of the area of social interaction. The analysis of data indicating contacts made by local residents with the larger community in terms of trade and service is dealt with in a later chapter.

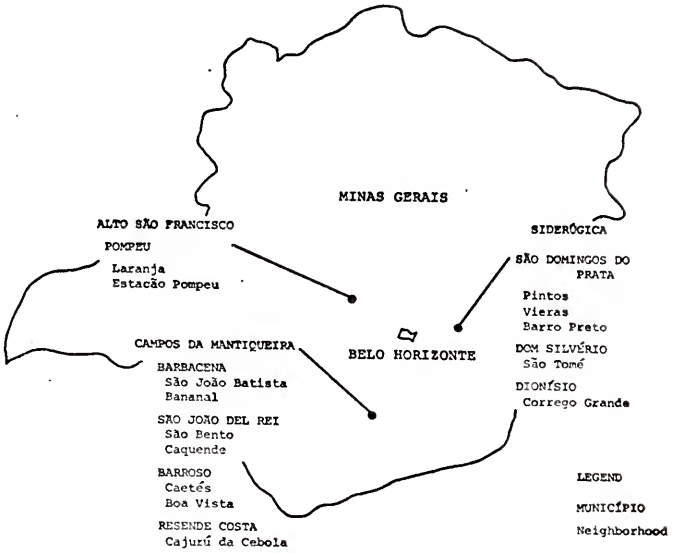

Figure 2. Rural neighborhoods studied in the metropolitan community of Belo Horizonte

The *Fazenda* Neighborhood

The *fazenda neighborhood* consists of groups of large farms or ranches, *fazendas*, that are devoted primarily to dairy and beef cattle production supplemented by mixed crops. In many instances this type of neighborhood is located far from any large nucleated settlement. It can be found in all regions of the state of Minas Gerais, although the actual size of territory in the neighborhood varies a good deal because of variations in size of landholdings. The traditional fazenda as defined above was characterized by a high degree of social isolation. This isolation of the fazenda neighborhood has been moderated by improvements in basic road connections necessitated by the primary economic activity of such farms, dairy and beef cattle production. Fazendas that specialize in homemade cheese and/or beef cattle tend to be in greater isolation than farms that must supply milk to regional processing plants or to cheese factories on a daily basis. This recent integration of the fazendas with the metropolitan economy has reduced the isolation of the fazenda neighborhoods. The daily deliveries require better transportation facilities which, in turn, lessen social isolation. The farm owners, *fazendeiros*, put continual pressure on local government to improve farm-to-market roads. Nevertheless, the need of large landholdings for pastures tends to isolate some types of cattle fazendas from each other and from nucleated settlements. This isolation is intensified by hilly terrain and numerous streams. However, it should be emphasized that this type of neighborhood, despite its partial isolation, still depends on outside institutions for the satisfaction of many needs.

The present settlement pattern is in most cases focused around the "big house" of the original fazenda together with its outbuildings. By inheritance, most of the original large holdings had been sub-divided into various fazendas often owned by kinsmen, descendants of the original owner. Wage workers, renters, sharecroppers, and traditional dependents lived in various parts of these farms, near the main houses, at crossroads or milk pick-up points, or on the land they had been given to work.

Fazenda neighborhoods of this type usually consisted of ten to twenty families. The roads from fazendas to towns were almost always dirt, unless the fazenda happened to be located on a main highway between two major cities. In that case the fazenda was often dissociated from the rural neighborhood and local community, since transportation to the nearest urban area was readily available.

There is a great deal of variation in farm technology in the area. However, in isolated rural fazenda neighborhoods the most simple and inexpensive implements were used. Ox carts were the usual means of transportation within the fazenda, bringing crops or silage from fields to storage areas. In cultivation of the soil the oxen were also used to pull plows. However, as pointed out above, little cultivation was done, and the land was almost totally devoted to natural pastures. The more modern fazendeiros made silage from elephant grass mixed with green corn and stalks, or other plants grown for the purpose, such as sorghum or oats. There have been attempts to encourage the growing of better silage crops and the improving of pasturage by extension agents of ACAR, the state extension service.

One of the major problems was lack of machinery, caused by unwillingness to invest in a venture with potentially low profitability (both meat and milk have nationally fixed prices) and by difficulties in obtaining long-term loans. Sometimes the milk cooperatives buy farm machinery for the joint use of members, but this is rare. In one locality visted by the author the milk cooperative owned two tractors with attachments for silage making and other uses. The use of this machinery was divided among members. Other milk cooperatives have resisted investment in anything not directly connected with either the production of milk; its handling, storage, and shipment; or the health of livestock.

The level of living of the workers contrasts with that of the fazendeiros. The size and quality of construction of the housing was distinctive. The one-story farm house, known as the "big house" (*casa grande*) or the "seat" (*casa sede*), built in an era when large, extended families were reared on the fazenda, is reasonably comfortable, although simple, with accommodations for as many as twenty persons. However, at the time there were few permanent residents: a caretaker and the fazendeiro (often living there only part of the week). These houses are well-built, if not especially well-maintained, wood-frame constructions with cement-stucco exteriors and ceramic tile roofs. (One fazendeiro took the author into a storage area under his house and kicked handhewn beams at least 30 centimeters in diameter.) The ceilings of the fazenda house are usually high, although sometimes a false ceiling of straw matting was hung to create a dead air space that was said to insulate the house from the heat of summer. The floors are of wide wooden planks and were rarely covered by any type of carpeting.

These houses stand 1 to 1½ meters above the ground, probably to keep insects and other fauna from entering. In many cases the main entrance had several wide steps leading up to a veranda that often ran the full length of the house. The "big house" of the fazenda usually had plumbing in both kitchen and bathroom, fed by a holding pond built on a nearby stream. The water power of this stream had been harnessed to create a weak source of electric power used only for lighting, although this power could be diverted to a grist mill for grinding corn.

The dwellings of the workers, in contrast with the "big house," are small and in poor condition. These dwellings were constructed of locally made brick, sometimes covered with plaster or whitewash, and had tile roofs. Some houses were made of wattle-and-daub and had thatched roofs, although these were less common, since it is widely known that the insect (the *barbeiro*) which carries the incurable Chagas disease lives in the wall and thatch of these constructions, coming out a night to bite and perhaps to infect sleeping residents. It was more common to see wattle-and-daub construction used for storage than for residence. The workers' houses were built on the ground and had dirt floors. As many as twelve persons might live in a tiny two- or three-room building with no electricity or plumbing facilities.

Thus, the fazenda neighborhood is characterized by a clearly distinguished two-class social structure that determines the primary relationships among residents. The fazendeiros and their families form the upper class. The boundaries of social interaction for members of this class usually extend far beyond the immediate locality, to

towns and cities, while the boundaries for workers, who comprise the lower class, are much more restricted, extending not much beyond the nearest village or town, where they were infrequent visitors. The fazendeiros were so involved in town life that they frequently maintained two residences, one at the farm and another in a nearby town or city, where their families enjoyed amenities not available in the country: social clubs, shopping, and better educational facilities. Possession of a truck of car (sometimes both) enables the fazendeiro to have geographic mobility. The more intense interaction of fazendeiros and their families with townspeople is correlated with improvements of farm roads and availability of motor vehicles, phenomena which have arisen during the past fifteen years.

Another push toward maintaining a town life stems from the isolation from relatives that fazendeiros have increasingly become aware of. Formerly, the kinsmen who lived near one another, perhaps on adjacent fazendas, made a difficult trek by ox car or on horseback to a kinsman's farm only infrequently and on special occasions. Often, when a trip was made, visitors stayed a number of days. In Minas Gerais the family was and is the single most-valued institution, especially for upper class members. The family is the source of loans, advice, marriage partners, and conviviality. Now, with a two-residence system the fazendeiros' wives and children live in town the majority of the time, facilitating kin contacts. Thus, with the ease of transportation the town has become a focal point for frequent family get-togethers without the necessity of long-term visits.

Farm workers, on the other hand, had little access to means of ready transportation, nor had they resources to provide themselves

with more than one residence or the variety of goods and services available outside the neighborhood. Thus, interactions among workers and their families are intense and almost exclusive. The fazendeiro provided, via a system of patron-client relationships, the minimum necessities and access to crisis aid. But with the fazendeiro's increasing association with town life, the patron-client ties were growing weaker, and the workers were becoming more dependent on their own resources and on public services. This change in dependency patterns has contributed to rural-urban migration of members of the lower class. The fazendeiro was increasingly considering the workers a burden as greater demands were put upon him by the passage of social-security-type legislation for rural workers, for which he must contribute tax payments. Nevertheless, the workers themselves form a social group with close interaction, exhibiting the features of a *Gemeinschaft:* the predominance of common primary bonds, expressed in kinship, school patronage, economic activities, and recreational habits.

This social interaction is focused on the few institutions that exist within a neighborhood. The rural elementary school, providing three or four years of basic studies, was thought of by workers as a means of raising their children's chances in life. Some fazendeiros also sent their children to the rural school for the primary grades, but most students were from the working class. In the fazenda neighborhood the images of the outside world enter through the school, and the teacher herself was a non-agricultural influence on the neighborhood. With the waning of patron-client obligations

the workers were begining to feel that their children needed to receive as much formal education as possible in order to function outside rural society, but often the teacher, more than the parents, realized the importance of preparing many of the young to leave the neighborhood. Thus the teacher served to introduce changed expectations to the parents. The fazenda school building at times provided the setting for parties, meetings, and religious or secular celebrations. An important, but often unfulfilled, expectation was that schools would provide children with one good meal a day. (Often when foodstuffs were available, the teacher didn't know what to do with them or didn't have utensils or facilities to prepare the foods. At other times the food supply ran out and was not replenished for months.) This was also true in schools in other types of rural neighborhoods. All rural schools are run either by the state or by the local government, usually the latter. As a result, the school has become a favorite place for local politicians to campaign and make inspection tours. Politicians tend to encourage easily influenced rural people to become just literate enough to become voters. Thus the rural school has become a vehicle for reinforcing a political base.

Formal religious institutions were not so important a focal point as the school in most fazenda neighborhoods. Traditionally each fazenda had a chapel, but it was usually for the exclusive use of the fazendeiro and his family. These chapels were small and not suited for the saying of mass. Larger rural chapels were usually associated with small hamlets of small-holders, not with fazendas. As a result, religious instruction was frequently the function of the wife of the

fazendeiro, who taught her own children and the many godchildren she sponsored (sometimes as many as ninety) from families of the workers. This role has been diminished by the fact that the fazendeiro's wife and children now rarely visit the fazenda for long periods of time. Today, most visits by priests and nuns to the fazendas are limited to important occasions such as festivals honoring the patron saint of the locality or marriages. These events were rare, however, since most ceremonies were performed in town. Priests tended to focus their ministrations upon rural neighborhoods that have large chapels, and fazenda workers generally had to raise a quantity of money in order to induce a priest to come to say mass. In some localities the priests and nuns were becoming more interested in performing social services for people: teaching domestic skills, improving agricultural productivity, and providing a market outlet for surpluses. This type of activity was not very common, however, since a priest was usually in charge of a large area, including a parish church (*matriz*) and from five to thirty rural chapels. The scarcity of priests has caused the parishes to become larger, and the number of foreign-born priests was notable.

The institution of the family among fazenda workers has traditionally been less significant than the vertical ties of patronage. Fazendeiros were frequently asked to serve as godfathers of children in workers' families, and some of these were taken into upper class homes and reared as *filhos de criação*. There, they and the children of servants received advantages their parents could never offer. The increasing breakdown of the vertical ties of patronage did not seem

to have enhanced the internal strength of workers' families. In fact it seems to have created a force propelling migrants from the fazenda neighborhood.

Integrating ties within the neighborhood are intensified by the participation of residents in recreational activities. Many fazendeiros provided parts of cleared fields, equipped with goal posts, to serve as soccer fields. Young men and boys could be seen in the early evening practice-kicking the ball to one another. In well-integrated neighborhoods, there was often a team which played against teams from other nearby localities, usually on Sunday afternoons.

Case Studies of *Fazenda* Neighborhoods

The fazenda neighborhood, characterized by generalizations above, is being restructured as it loses population because of its inability to retain workers who have been simultaneously experiencing declining paternalism and rising expectations. With the loss of population, three similar, yet distinctive, patterns seem to be emerging.

1. A large fazenda neighborhood seems to be emerging, with a slightly smaller population than it once had, but with governmental agencies providing some of the security lost in the breakdown of patron-client ties. This emergence has been accompanied by a development of commercial agriculture and stock-raising, with strict employer-employee relationships and an increase in absentee ownership. This type is exemplified by Laranja.

2. There is also a neighborhood composed of medium-scale fazendas as farming units run by the owner, each of which employs only

a couple of hands for more rigorous tasks and relies increasingly on mechanization to replace labor. São Bento is an example of this type.

3. There is a neighborhood in which the fazendeiros continue to live on medium- or large-size fazendas and to use a pool of workers. Gradually the ties have been lessened as the fazenda was increasingly turned to commercial production, and the workers have attached themselves to a small hamlet which was improved and made attractive by the fazendeiro's patronage. São Tome is a specimen of this type.

The factors which appear to be important in these cases are the size of the fazenda, the residence of the owner (whether he lives on the farm or elsewhere), the decrease in population of the neighborhood, and the substitution of some form of security for traditional patron-client ties. A more careful look at the three cases will show both similarities and differences.

Laranja

Laranja is a fazenda in the northeast corner of the município of Pompeu in the Alto São Francisco region, near the municípios of Felixlândia and Curvelo. Originally it was one large piece of property; it has since been sub-divided into three fazendas. One has retained the original name; the others were called Fazenda Laranjinha and Fazenda Coxo. At one time all three were owned by brothers, but only the Laranja was still in the family of the original owner. The fazenda once had high quality land for cultivation, but the building of the Tres Marias Dam in the 1960s had caused the inundation of large amounts of good soil. When the water level in the reservoir rose, a third of the residents of Laranja left the area. The fazendeiro sued the

government for the loss of valuable property; the case was still in litigation at the time of the author's visit.

The fazendeiro spent most of his time in Pompeu, seat of the município and center of a rurban community, in a house more than a hundred years old, which he inherited from his father-in-law. The house had been in the family for fifty-four years, but until recently it was in poor condition. While his wife spent most of her time in town, the fazendeiro had totally renovated and refurnished the interior of the house.

The fazendeiro spent three or four days a week on the fazenda; the rest of the week he stayed in town. One of his *agregados* (traditional dependents, sharecroppers) acted as manager in his absence. The *agregado*'s twelve-year-old daughter lived with the fazendeiro's wife in Pompeu. She was being reared by the fazendeiro and was attending junior high school (*ginásio*). She, like her four predecessors, was a goddaughter of the wife of the fazendeiro. Her duties were to help in the kitchen with the cooking and serving of meals, to fetch items from the grocery store, and to help with household chores. She also watched and played with the small grandson of the fazendeiro, who spent most of his time with his grandmother.

The fazenda produced milk, cattle, corn, rice, cotton, and beans. All of these products, except a portion reserved for household use, were sent to market in Belo Horizonte. Once, a quantity of charcoal was produced on the fazenda, but the woods had been destroyed and the production was ending. The fazenda contains 755 *hectares*, but originally it held 2,500 hectares before division, sale, and loss of

land to the reservoir. There were only twenty families remaining on the fazenda; there had been about sixty families, or three hundred persons, living there. Most of the workers were *vaqueiros* who looked after the beef cattle. The production of milk for market had begun seven years before, when the cooperative was founded. Before that time, the only market for milk was a small creamery in Pompeu. The fazendeiro owned a tractor, as did some other fazendeiros in Pompeu. The coooperative also owned some farm machinery that might be used by its members. The fazenda had a small water-powered generator for electricity, but this generator was not suitable for running machines.

Two institutions on the fazenda did much to integrate the workers into a social group: the soccer team and the school. The school was attended exclusively by members of the families of workers and of small-holders in the vicinity. The teacher had been sent out from Pompeu, where she went on weekends. The soccer team played teams from the *vila* of Silva Campos and from other rural settlements.

Religious activities were minimal, since in the neighborhood, workers liked to ride the milk truck to Silva Campos or to Pompeu to attend church. The owner of the milk truck, a nephew of the fazendeiro, lived at Laranja and made the round trip to the *sede* daily, picking up paying passengers as he went. The annual religious festival on the fazenda, usually in June, had been deteriorating in the last few years, according to workers. Since there were fewer persons to bear the cost of the festival, the fazendeiros have been less inclined to support the event, and improved transportation has made for more ready access to regular recreational and religious activities in town.

See Figure 3 for the delineation of major social areas in the neighborhood of Laranja.

São Bento

The fazenda of São Bento is a medium-sized farm of 220 hectares in the southeastern part of the município of São João de Rei in the region of Campos da Mantiqueira, near the município of Piedade do Rio Grande. The fazenda is situated in a valley off the município road. There were two new buildings for animals, an old fazenda house, a garage, a storage building, and a cheese factory on the property. The owner had one employee who helped him farm; three others employed by the cheese factory lived on the land. The building housing the cheese factory belonged to an entrepreneur from Santos Dumont who bought milk from the fazendeiro and transported and distributed the cheese. This fazendeiro managed the cheese factory for the absent proprietor.

The neighborhood of which São Bento is a part also includes Fazenda do Serro, owned by the fazendeiro's brother-in-law, who also had four families living on his property. A rural school maintained by the município was located on property of the Fazenda do Serro, between the seats of the two fazendas. The children of workers and of fazendeiros went to school together. In addition, some *sitiantes*, small-holders, who lived along the road maintained by the município sent their children to the school, a thirty-minute walk for these children. The fazendeiro, who completed only seven years of schooling, did not think that elite education was a good way to train farmers. Therefore, instead of sending his children to town to live with relatives or in a boarding school, he kept them at home and sent them to

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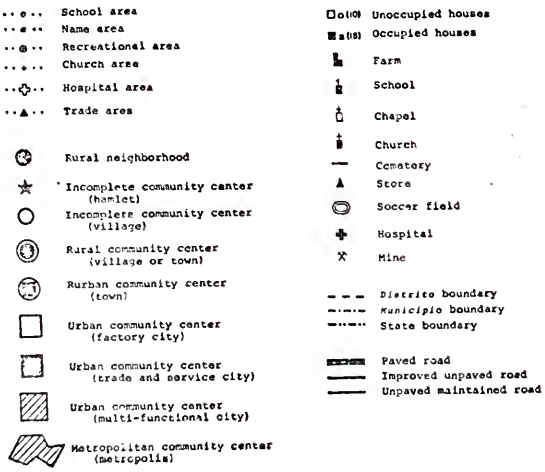
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Name area
Recreational area
Church area
Hospital area
Trade area
Rural neighborhood
Incomplete community center (hamlet)
Incomplete community center (village)
Rural community center (village or town)
Rurban community center (town)
Urban community center (factory city)
Urban community center (trade and service city)
Urban community center (multi-functional city)
Metropolitan community center (metropolis)
o(10) Unoccupied houses
a(15) Occupied houses
Farm
School
Chapel
Church
Cemetery
Store
Soccer field
Hospital
Mine
District boundary
Municipio boundary
State boundary
Paved road
Improved unpaved road
Unpaved maintained road

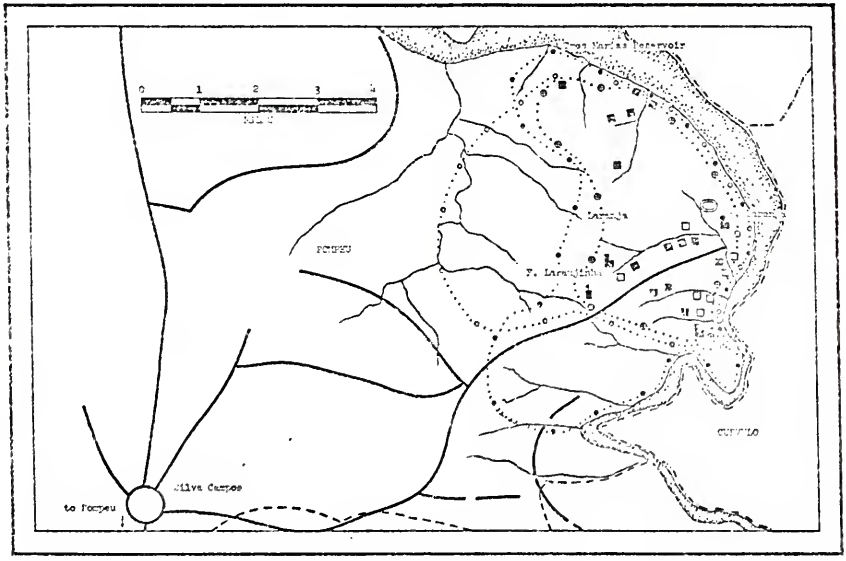

Figure 3. Major social areas in the neighborhood of Laranja

school on the fazenda. The workers felt that the fazendeiros' sending their children to the school upgraded it, and they were proud of their school.

They combined area of Fazenda São Bento and Fazenda do Serro once made up only Fazenda São Bento. The fazendeiro had purchased São Bento in 1969 from a non-relative so as to be near his brother-in-law. The homes of the two families were quite close together near a line dividing the properties. There was constant visiting back and forth, with the children playing together and the women consulting on family problems. On weekends they would all go to visit relatives in Piedade do Rio Grande, where both of the couples were born and reared.

The relations between workers and fazendeiros were strictly businesslike. Families of the two groups did not socialize, nor had strong patron-client ties developed. Workers did rely on the fazendeiro to transport them to and from the seat of the município from time to time, for there were no stores, nor even a bar, near the fazenda. The village of Emboabas and the hamlet of Paraiso were fairly near, but still more than an hour's walk from the fazenda. Most workers attended church in Paraiso, although some went to Emboabas, because it was nearer to their houses. The fazendeiros went to church in Piedade do Rio Grande, but they did attend festivals, along with the workers, at both Paraiso and Emboabas. For Holy Week all of the rural residents generally went to the Piedade do Rio Grande.

The fazendeiro had made substantial investments in mechanizing his farm. He had a 10-horsepower electric motor, a milk cooler, a silage cutter, a rice cleaner, a corn sheller, a jeep-like car, and an

animal-drawn drill, as well as plow and artificial insemination equipment. He had a Holstein bull, forty-seven milk cows, five steer calves, seventeen heifer calves, and twenty-three heifers and cows between twelve and twenty-four months of age: a total of ninety-four head. The herd was then seven-eighths Holstein. He also had two oxen, three horses, and fifty swine. Only 13 hectares was devoted to crops; the remainder was in pastures or special grasses for silage. He also owned a small piece of property in Piedade do Rio Grande, 50 hectares he inherited.

The delineation of the main social areas in the neighborhood of São Bento is demonstrated in Figure 4.

São Tomé

The territorial delineation of this socially integrated rural neighborhood includes the Fazenda São Tomé, two adjacent fazendas owned by relatives, and a hamlet containing eight houses, two tiny store-bars, a two-room município school, a chapel, and a health post. Most of the persons who patronzed these institutions were fazenda workers and their families.

Fazenda São Tomé, largest of the three farms, is located on the main dirt road between two rural município *sedes*, São Domingos do Prata and Dom Silvério. The main house, casa *sede*, was located right off the road, on the edge of 272 hectares of land devoted to mixed farming. Both the cultivated land and the pastures of this property were in good condition. The fazenda had two hundred head of cattle, including forty-five producing milk cows, six oxen, thirty heifers that would be kept to add to the herd, and other calves being fattened for market. The

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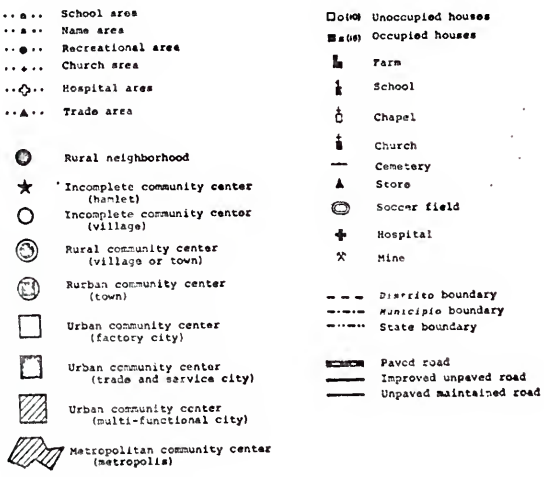
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Church area
Hospital area
Trade area
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Unoccupied houses
Occupied houses
Farm
School
Chapel
Church
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Paved road
Improved unpaved road
Unpaved maintained road

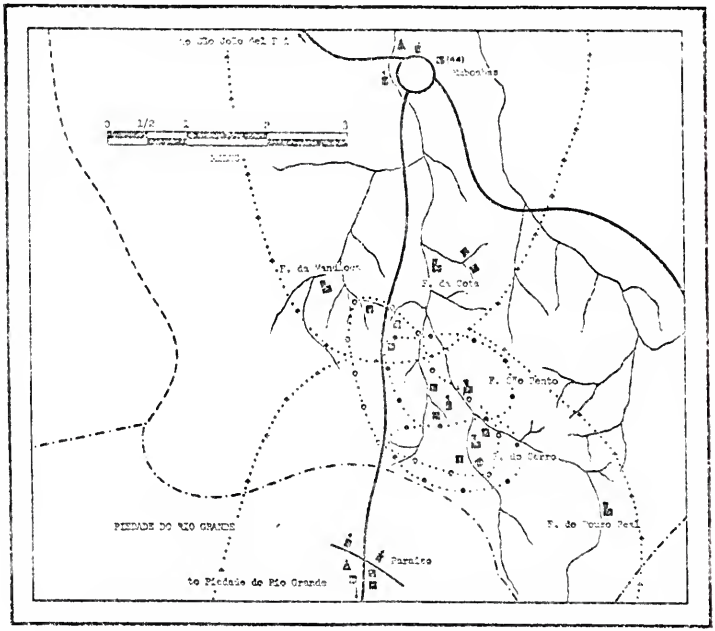

Figure 4. Major social areas in the neighborhood of São Bento

wife had charge of between a thousand and four thousand chickens that she was raising to market through a chicken producer's cooperative in Viçosa. The fazendeiro owned two types of swine, which were being raised for market under the care of their son. A number of laying hens produced eggs for home consumption, and the surplus was sold in São Domingos do Prata. The fazendeiro proudly told the author that he was the first member of the São Domingos do Prata milk cooperative and was then the second member in quantity of milk produced, between 200 and 300 liters of milk daily. In addition, the fazenda produced beans, rice, corn, potatoes, tomatoes, cabbage, green beans, peas, red and yellow carrots, *jilô* (a fruit), and oranges, all of which were used at home and marketed in three nearby municípios. The fazendeiro and his wife lived on the farm with two unmarried adult children, a son and a daughter; a *filha de criacão*, aged ten; and a married son and his family, who resided in a separate house and were allowed a certain portion of the property for use and management. Ten families of *colonos*, or *agregados*, sharecropped on the property and helped care for the herd.

Material culture differs sharply between workers and owners. The fazendeiros had a diverse range of technology and possessions, including electric generators for lighting and radios; machines to process foods (grinding corn, preparing manioc), cooking pots, utensils and dishes, two kitchens (a large outdoor kitchen for preparing massive quantities of food for workers during harvest season and a smaller indoor kitchen for family use); indoor plumbing, bathrooms; beds with innersprings, sofas, large but simple tables and benches for feeding a

large family; saints' images and little shrines; a number of sets of clothing for various occasions; and a varied diet. In contrast, the workers had a more limited, homemade material culture: a few stools and benches, a small table, straw mattresses or mats for sleeping; a couple of pots, a few dishes, wooden spoons (carved by hand); at most two sets of clothing; a diet of beans, rice, and corn; and no latrines.

The people of the neighborhood centering in São Tomé shared institutions of the nucleus in many ways. The children all attended the município primary school located there. The chapel was extremely active, patronized and financially supported by the fazendeiros. Frequent services were held in the chapel, always on Sunday and sometimes during the week as well. Four active *irmandades* (religious brotherhoods), three for women and one for men, were directed by the fazendeiros. These lay brotherhoods take care of the poor by giving aid in sickness and by helping to pay the expenses of rites of passage such as weddings.

The school had a parent-teacher association that met regularly and an active adult education program, which had graduated thirty adults who thus became eligible as voters. There were two soccer teams that regularly engaged in matches with other teams in the município of Dom Silvério.

The health post, operated locally, had a volunteer doctor from Dom Silvério; he visited twice a week to attend the poor. The fazendeiros were excluded from this service, and they had to go to the *sede* of the município or to São Domingos do Prata for health care.

In addition to insuring the strength of these institutions, the fazendeiros were bound to pay many of the workers by ties of

godparenthood and by obligations to provide services such as transport (by truck) to the *sede* once a week and use of a grist mill to grind their corn. The workers provided the fazendeiros with their labor as sharecroppers.

There were many ties of kinship among workers, and these ties tend to bind the neighborhood together. The fazendeiros reinforced these ties by helping their godchildren to meet the financial obligations of getting married: providing a dowry and the refreshments for a wedding feast. In rural neighborhoods where such aid did not exist, poor girls often sought jobs as maids in cities far from home in order to obtain a proper wedding dowry. Often they were thereby encouraged to lose contact with their former neighborhood and to marry outside it. With this type of financial aid the fazendeiros attempted to keep the workers on the fazenda while the attractions of jobs in steel company towns of the region were very tempting.

The delineation of major social areas in the neighborhood of São Tomé is shown in Figure 5.

The Nucleated Neighborhood of Small Farms

The second type of rural neighborhood consists of a group of *sítios* (small farms) clustered around a small nucleus. This center is usally composed of a school, a store, ten to fifteen houses, sometimes a chapel and/or a soccer field. The houses in the nucleus are situated on garden plots, in essence being small *sítios*. Both the scattered *sítios* and the garden plots of the nucleus are used for subsistence production, with surpluses sold in local village or town markets. When

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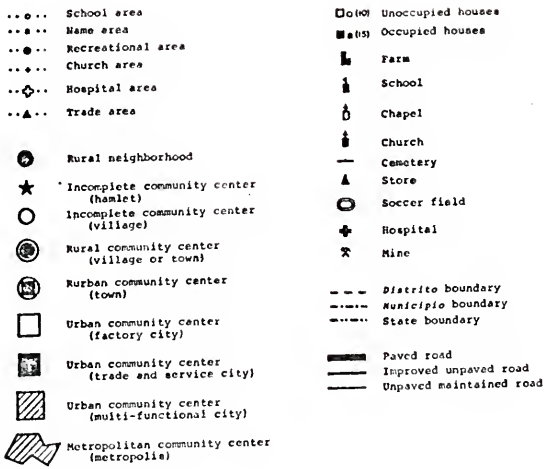
School area
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Improved unpaved road
Unpaved maintained road

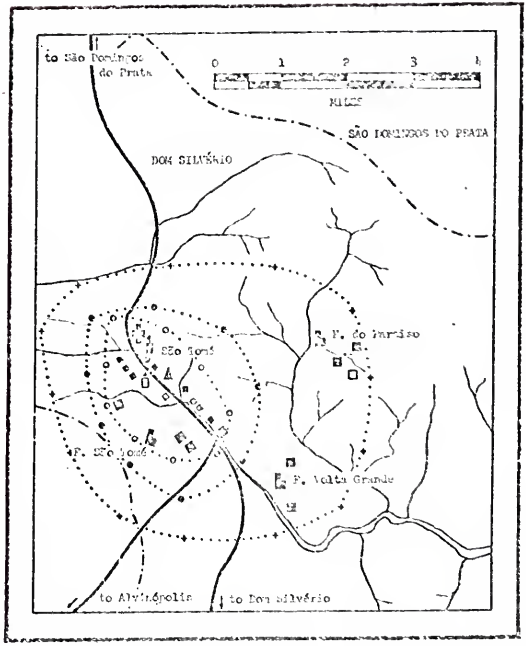

Figure 5. Major social areas in the neighborhood of São Tomé

a chapel is found, it often serves several neighborhoods. These neighborhoods are always located near a river or stream, the source of water for the residents. There are usually medium- or large-scale fazendas in the vicinity of the neighborhood where residents find occasional day work. In some regions, employment can be found in non-agricultural activities such as mining, quarrying, and making charcoal.

The *sitios* are located along a road that leads to a main highway. Transportation out of the neighborhood, for most residents, is by horse or on foot. Bus service is often found on main highways, or a passing truck will pick up passengers and take them to the nearest town. The existence of train or bus stops often gives rise to nucleated neighborhoods, as occurred at Estacão Pompeu, a rural train station in the município of Pompeu. Most of the farms are from 2 to 25 hectares, a size easily cared for by a man and his immediate family using muscle power as the primary source of energy. Each house is situated on the land worked, although residents of the nucleus sometimes have larger parcels of land within close walking distance. The number of families in this type of neighborhood ranges from fifteen to forty.

The material culture of residents of this type of neighborhood is not very different from that of fazenda workers. Work tools are simple and designed for the use of one man: hoes, axes, scythes. Tools are frequently lent among relatives and close neighbors. Some of the larger *sitios* have an ox and a plow. Houses are constructed of brick, adobe, or wattle and daub, with either thatch or tile roofs. Outbuildings for animals are rare, although owners of livestock often build

corrals with rude stone or wood fences. The interiors of houses are simply furnished with items made in the neighborhood or local community: wooden kitchen utensils, simple tables, straw mattresses, and wardrobes, chairs, benches. Manufactured goods are few and not produced locally: battery radios, iron pots, glassware, dishes, and metal kitchen utensils. Many residents of these neighborhoods said that money earned through selling crops was usually invested in production tools and goods, rarely in household items. Apparently, the inventory of manufactured goods acquired by a family is built up over a lifetime of hard work, and these goods are not capriciously replenished or replaced.

The main institutions which integrate families in a neighborhood usually include kinship, the primary school, the local store or bar, and the chapel. Kinship ties are extensive within a rural neighborhood, and intermarriage among residents is common. Because of the small size of farms and the rule of equal inheritance of property, only one male member of a sibling group ordinarily stays in the rural area. Others seek employment in industrial towns or cities. However, brothers who remain marry locally and build strong kin ties with consanguineal and affinal relatives within the neighborhood, based on godparenthood (reinforcing kin ties), mutual aid, and visiting. Marriages between cousins are common and are not considered dangerous, although marriage is expected to be based on ties of romantic love. That these ties grow between cousins is not surprising, since families have frequent social interaction and even migrants to the cities make frequent visits home. Marriage with residents of nearby rural neighborhoods is also common and serves as a link between neighborhoods. Many members

of the *sitiante* class claim kinship, even based on illegitimacy, with prominent families of the município, as the author discovered in Boa Vista in the municipio of Barroso.

The local primary school also serves to integrate the nucleated neighborhood of small farms. Often the teacher is from a family of the neighborhood, and her training is limited to a level slightly above that of her students. In the fazenda neighborhood and in higher-level locality groups, school teachers are often outsiders or members of the upper class and have little rapport either with students or parents. In schools in the neighborhood composed of families on small farms, the teachers frequently are well-accepted, respected members of the locality.

Unlike the fazenda neighborhood, where undesirable land is often donated by the fazendeiro for the location of the school; in this type of neighborhood the school site is selected by residents themselves and therefore is more conveniently located for most students. In all rural schools the facilities are simple, with one or two classrooms, with several grades mixed in the same room. In addition to the regular primary school, the building houses adult education classes offered in the evening. According to federal law, school lunch is supposed to be provided to children attending day classes, and in this type of neighborhood, efforts are made to insure that food is prepared and available. It is not uncommon for mothers to help with preparation of food, although it is primarily a responsibility of the teacher. The school building also functions as a meeting place for parties and secular celebrations, and sometimes for the saying of mass if no chapel is nearby.

Residents feel that the school is an asset to the neighborhood. They see that it brings them attention from the outside when the *prefeito* visits or the school inspector comes. Although parents recognize the importance of primary schooling, secondary schooling is still considered a luxury because of its non-availability, cost, and unfamiliariity. Nonetheless, the author did encounter rare cases of rural residents, through great personal effort and difficulties, attending secondary schools in a nearby town.

Leisure time activities, especially of men, are centered around the neighborhood bar. Regionally known as a *"boutiquim"* or *"barzinho,"* the bar serves as a meeting place for men, who spend much of their free time there, drinking, conversing, and exchanging news. A priest interviewed by the author expressed great concern about the prevalence of alcoholism among rural men, because of its disorganizing effect on family lives and budgets. He was attempting to organize the men into some other form of social club to deter them from going to the bar to make and keep friends.

The bar is a small unpainted building, no more than ten by twelve feet square; within, a counter runs along one side. There are no chairs or tables. What little merchandise there is has been purchased in a supermarket or retail store in the nearest town or city. Usually it consists of two or three bottles of *cachaça* (a cheap Brazilian sugar-cane liquor); soft drinks, beer; several open packs of cigarettes, sold individually; a couple of bars of soap, a sausage, some penny candy, headache remedies; a few miscellanous items. The bar is almost always open; the owner resides in an adjoining room. A

battery radio plays popular music or broadcasts professional soccer games. Notices of secular and religious festivals are posted on the walls from time to time.

Organized soccer teams are often found in nucleated neighborhoods of small farms. The soccer field is usually located near the school or the bar. On Sundays the teams play against teams from other rural neighborhoods. In the município of São João del Rei the rural neighborhood of Caquende has an organized soccer team and a cheering squad that travels with the team to nearby localities: the neighborhoods of Engenho de Serra Jaguara and a place on the other side of the reservoir, which is reached by ferry. During the June festivals the typical celebration includes a soccer game with a team from another locality.

Religious homogeneity is an important integrating feature of the nucleated neighborhood of small farms. All residents are Roman Catholics; the profession of Protestantism is unknown among smallholders in rural areas. However, not all nucleated rural neighborhoods have chapels. In two of the neighborhoods without chapels of their own the residents attended open country chapels in adjacent neighborhoods. Residents of Boa Vista went to Bananal, and residents of Caetes, to São João Batista. Even neighborhoods with chapels are not guaranteed frequent celebration of the Sacraments, primarily because of the general lack of priests in Brazil.[4] A single priest may be responsible for as many as thirty rural chapels, he may be in charge of several parishes. Consequently, the greater part of the maintenance of religious tradition in rural areas becomes the responsibility of local lay people.

The most religious members in the neighborhood often led prayer services on a regular basis. Some were charged with the maintenance and cleanliness of the chapel and the *casa paroquial* (parish house), if one existed. Others administered donations for community welfare, especially for aid in time of sickness. On those Sundays when the priest did not come, nuns sometimes visited rural neighborhoods to give catechism classes.

The success of a local religious festival, dedicated to the patron saint of the chapel, depends upon the cooperation of all residents. Most families contributed homemade foods and coffee to be sold at the festival. Residents who had the larger cash incomes, such as the school teacher or the proprietor of the bar, usually defrayed the costs of fireworks and other incidentals, including the fee for saying mass. It is still common for rural neighborhoods lacking chapels, or where chapels have been closed, to have religious festivals dedicated to the patron saint of their place name.

Some, but not all, religious sacraments are performed in the rural neighborhood. Baptisms may take place anytime the priest visits the chapel, but in cases of imminent death, any layman can administer baptism. First communions are rare and generally take place when the bishop comes to the area. Although they are usually held in the *sede* of the município, they are sometimes held in rural chapels. In Brazil, marriage has two separate ceremonies, religious and secular. Since the secular ceremony must be performed in a place that has a *cartório* (registrar's office), usually in the *sede* of a município, rural couples who decide to be married legally, often have both ceremonies performed in town.

Regular visitors to rural neighborhoods are mostly kinfolk, priests, and nuns. Representatives of local government make occasional visits, especially just prior to election time. In addition, municípios with social service programs sometimes send representatives to help create rural neighborhood organizations. These social service workers operate under the auspices of either the church or the local government. Agents from the state extension service, ACAR, make infrequent visits, especially when invited by local farmers. Radio programs directed to rural residents broadcast information, news, and announcements of interest to the small farmer: one of the most important daily contacts a neighborhood has with the larger community.

These generalizations are supported by looking at two specific case studies: one of Caetés, in the município of Barroso, in the region of Campos da Mantiqueira, and the other of Pintos, in the município of São Domingos do Prata, in the region of Siderúgica.

Caetés

Caetés is one of four nucleated rural neighborhoods in the community of Barroso; it is located in the northeast corner of the município. The main road connecting the town of Barroso to its northern neighbor, Dores de Campos, forks near a stream that also serves as an administrative boundary. The right fork in the road leads to Caetés and is its only direct and well-maintained access to the town of Barroso. The neighborhood, a line-type settlement, is situated along this road and the Corrego Bom Jardim, a small creek that parallels it. There were fourteen houses in the neighborhood, some clustered around the primary school, others around the small store. Two large cattle fazendas

border the neighborhood, one on the north, the other on the south.

The physical unity of the neighborhood is largely determined by the streams, the lay of the land, and the roads. The small size of holdings and their proximity also influence this unity. Caetés is located in a relatively flat valley. Consequently, bicycles are common there, because its layout is less influenced by the hills and irregular terrain that characterize much of the region of Campos da Mantiqueira. The *sitios* of the residents, as well as small pieces of land they rent, lie along the southern border of Fazenda Bom Jardim. Many of them worked on this fazenda during peak labor periods to supplement the meager production of their *sitios*. The primary activity on the *sitios* was the growing of corn, beans, manioc, and the raising of a few chickens and milk cows. Small surpluses were peddled from door to door in the town of Barroso. At times the men obtained work in limestone quarries located close by. The only residents not primarily employed in agriculture were the school teacher and a road maintenance worker employed by the município government.

The primary school is the main institution providing social integration for the neighborhood. It had two classrooms, two non-operating bathrooms, and a kitchen. Thirty-six students (out of an eligible school-age population of forty-four) came from the neighborhood, and parents were concerned that their children receive the opportunity to go to school. The eight children not in school, mostly girls, came from families who did not place a very high value on education, because it did not provide them very much practical help in coping with daily existence. These ideas were expressed in a parent-

teacher meeting attended by the author in Caetés schoolhouse. The schoolhouse not only served as the place where children received formal education but also functioned as a gathering place for families in the neighborhood, especially on secular holidays.

At a small roadside *boutiquim*, cigarettes and cachaca were sold to men who generally met there on week nights to socialize and drink. Unlike *boutiquims* the author visited in other rural neighborhoods, this one had no other merchandise, and therefore the occasions for women to visit there were extremely infrequent. Someone from Caetés went to Barroso almost every day and had the opportunity to buy goods there. Increased local revenue derived from the expansion of town industry (cement) had allowed for improved road maintenance throughout the município, making the town more accessible to residents of outlying rural neighborhoods. Residents of Caetés often spent weekend evenings in Barroso, attending mass or walking around the plaza, passing time in the newly built bus station.

Even with the increased attraction and availability of the town, rural dwellers maintained, when possible, many local religious customs, such as attending the rural chapel. They felt more comfortable, they said, among peers in the intimate setting of a chapel where they had greater access to the priest, during his visits, than they had in the crowded parish church in Barroso. There was no chapel at Caetés, but the people there were strongly linked to the chapel at São João Batista, making the limits of the chapel district much greater than the limits of the school district or the place-name district.

Kinship ties also function to integrate the neighborhood, since the majority of residents were related to one another consanguineally or affinally. Of fourteen households, three of the heads were brothers, and another was married to their sister. The wives of the brothers were from a neighborhood close by and had many kin ties there. Although endogamy was not the rule, it seems to have resulted from residential propinquity and close interaction, and those who married outside of the neighborhood tended to leave it. Regular visits to Barroso were providing opportunities for young people to arrange courtship alliances with townspeople.

Social bonds among neighborhood residents are maintained by numerous instances of mutual aid. For instance, families lent work tools--hoes, scythes, axes, plows, and ox carts--to neighbors and relatives. They also worked together cooperatively in constructing or repairing buildings, but the work was always paid for by the owner of the building. Occasionally, they established sharecropping relationships among themselves, especially within the family. When someone was ill, neighbors helped out with home remedies and bedside attendance as well as transportation to the doctor's office.

The delineation of the major social areas of the neighborhood of Caetés is shown in Figure 6.

Pintos

Pintos is a rural neighborhood located in the município of São Domingos do Prata, located near the border of the município of Dionisio. The terrain is hilly, and the dirt roads were in poor condition, especially a stretch of road that connects Pintos to the main road

LEGEND

- School area
- Game area
- Recreational area
- Church area
- Hospital area
- Trade area

- Rural neighborhood
- Incomplete community center (hamlet)
- Incomplete community center (village)
- Rural community center (village or town)
- Rurban community center (town)
- Urban community center (factory city)
- Urban community center (trade and service city)
- Urban community center (multi-functional city)
- Metropolitan community center (metropolis)

- Unoccupied houses (10)
- Occupied houses (18)
- Farm
- School
- Chapel
- Church
- Cemetery
- Store
- Soccer field
- Hospital
- Mine

- *District* boundary
- *Municipio* boundary
- State boundary

- Paved road
- Improved unpaved road
- Unpaved maintained road

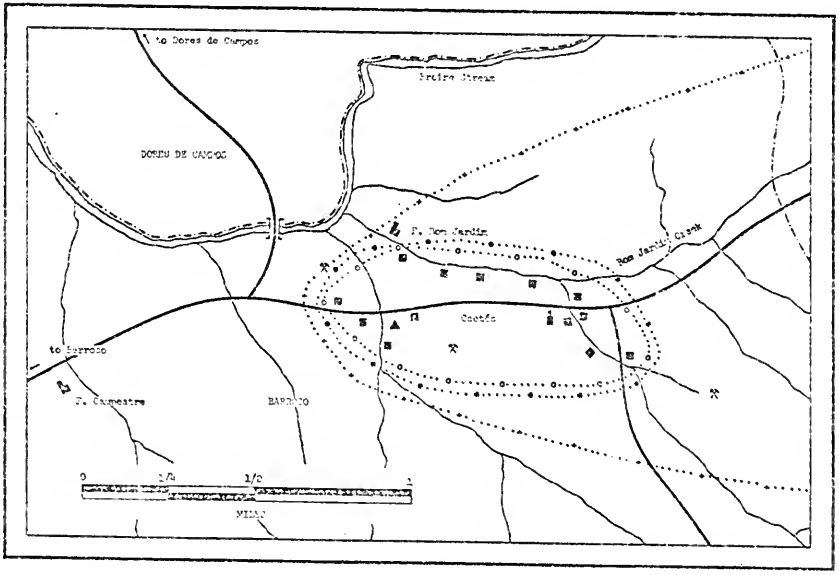

Figure 6. Major social areas in the neighborhood of Caetés

joining the *sedes* of São Domingos do Prata and São Jose do Goiabal. Even the main road was not particularly well maintained. A creek together with tiny tributaries flowing into it parallels the road and provided water for the neighborhood. The *sitios* and the nucleated settlement were adjacent to two large fazendas. There were twelve houses in the hamlet, as well as a store, a municipio primary school, a chapel, and a church house. There were twenty-eight other families in the neighborhood, living on *sitios* scattered around the nucleus, most of them along the road and the streams.

Pintos is physically characteristic of many neighborhoods of *sitiantes* who have acquired marginal lands near large cattle fazendas. Rough terrain, poor roads, and many streams have traditionally tended to isolate the neighborhood. This isolation had recently been lessened by the neighborhood's proximity to two commercial farms that participate in supplying milk to Belo Horizonte. The milk industry has brought increased income as well as improved roads to the residents of Pintos; the fazendeiros then hired more *sitiantes* to make charcoal, plant and clear pastures, and improve roads so that trucks and buses might pass the fazendas, making it easier for Pintos residents to get to town.

There were no cars in the neighborhood, although some residents were thinking of purchasing a communal car for the horticulture club. Private means of transportation available, besides walking, were twelve horses, a horse cart, an ox cart, and a bicycle.

The residents have traditionally been subsistence farmers occasionally supplementing their incomes by working on the fazendas.

However, under the influence of a striking institutional change, there is a movement away from subsistence farming toward fruit and vegetable production for market. The motivating force for this change came from the outside. The parish priest from São Domingos do Prata, assisted by social service workers and agricultural technicians, recently organized a horticultural club. It was given money and technical assistance to encourage *sitiantes* to make more productive use of their land. At the same time, a producer's cooperative was set up, in 1972 in São Domingos do Prata, to market the produce of members from various clubs in ten rural neighborhoods, of which Pintos was one.

An agricultural technician has taught two short courses focusing on planting techniques and irrigation, one on vegetables in 1972 and one on fruits in 1973. The club has balanced production of various crops and has invested capital in chemical fertilizer, manure, plows, and pesticide spray-guns. The social service worker said that the pre-existing "community spirit" of Pintos was a primary factor in insuring the acceptance of the club idea and the success of the cooperative venture. The club elected its own officers. The president of the club said that he had learned from the agricultural technician that his 23-hectare *sitio* was not suited to subsistence production of rice, beans, and corn. He was then producing only tomatoes, green peppers, green beans, cabbage, and oranges, and he purchased rice and beans from the income he obtained by selling these crops in the town of São Domingos do Prata.

The success of the horticultural club was largely based on the copperative spirit in the neighborhood, which has traditionally been

focused on the chapel and more recently on the school. For example, the chapel was built twenty years ago through joint effort. The priest, who was responsible for some twenty rural chapels, rarely visited the chapel at Pintos. Nevertheless, chapel activities continued, and the priest did come twice a year, both occasions for celebration. Those who attended the chapel contributed small amounts of money to the *caixa beneficente* (welfare collection), which was kept in the charge of three elders in the neighborhood. When someone became ill, the elders decided whether to use the money to buy medicine or to take the person to a doctor. The priest and the social workers had also begun two other clubs in Pintos: one for young people, a 4-S club, modeled on the American 4-H club, and a sewing club for women and girls. The priest had contributed a manually operated sewing machine, housed in a room in the chapel.

The município primary school was located closeby the chapel. The school building is of simple brick and mortar construction and has one classroom. No separate facilities for sanitary use or for cooking needs were provided. The classroom was furnished with bench-style desks accommodating two students per desk. Teaching equipment included a few wall maps, some pictures, and a small bookcase containing about forty well-used books. A corner table held food to be prepared for lunch, food provided by the federal campaign for school lunches and the American Food for Peace program: soybean oil, cracked wheat, wheat flour, and powdered milk.

The sole teacher for forty-one children and nineteen adults who attended the school lived in Pintos. Most of the students came

from Pintos, but about eight children and three adults came from Esperança, a one and one-half hour walk. The teacher instructed the children during a four-hour daytime session and the adults in a two-hour night class when butane gas was available for a lamp provided by the local government. Her training included four years of primary school and several short courses and sufficiency exams. Twenty-two first-year students and nineteen second- and third-year students were taught together and at the same time. Courses included Portuguese, mathematics, social studies, natural science, and religion (preparation for first communion, when requested by parents).

Twelve children from Pintos were attending the fourth grade in a school at Corrego Grande in the neighboring município of Dionisio. Some families sent their children to the *sede* to obtain further education, and in one instance an entire family relocated for this reason. Five of the teacher's children lived in the *sede*, attending secondary school while working full time to support themselves.

The chapel is dedicated to Our Lady of Perpetual Help, who has no set feast day. The priest came whenever the festivals were held, especially during May, the month of Mary. The residents had opportunities to hear mass when the priest visted nearby localities such as Barro Preto, Esperança, Gomes, and Corrego Grande, where mass was held in a classroom. The chapel at Esperança was the location for more important ceremonies such as baptisms, first communions, and burials.

The store, or *venda*, is a little more elaborate than a *barzinho*, but serves a like function as a gathering place for the residents of

Pintos. People went there frequently to buy items and to talk to friends. The store sold salt, pills, soap, candy, drinks, tobacco products, but no staple food items. Men tended to go there after a day's work, and children often stopped on their way to or from school to get candy. The *venda* owner purchased all his merchandise in the *sede* of São Domingos do Prata. He and his family also maintained a garden where they grew corn, beans, and some green vegetables.

There was no local health post, but there were, according to a *sitiante*, several local people who helped out in health crises. Most of the children were born at home with the help of the local midwife (*parteira*), but in the last two years, with the beginning of the producer's cooperative and the affiliation of its members with health insurance plans, more people were going to the doctor and the hospital in the *sede*. Some women became able to give birth in the hospital, who previously could not afford such care. The horticultural club has been used by the priest and the social workers to promulgate health campaigns, especially to encourage people to have their feces examined for parasites, an endemic health problem of the region.

The most common form of recreation was listening to local and metropolitan radio broadcasts. The most popular programs were the "Sertanejo," featuring country music and news and professional soccer matches. The old soccer field was being renewed, and a new team was being organized to compete with teams in other neighborhoods. The sewing club had sponsored a number of parties and dances, which complemented the function of the traditional religious festival in integrating the group. The most important religious festival is that of the

patron saint, as mentioned above, usually in the month of May. During the festival there is always a mass and an auction for the benefit of the *caixa benficente*, and other contributions are received for the chapel.

The delineation of major social areas in the neighborhood of Pintos is shown in Figure 7.

The Neighborhood of Scattered Small Farms

The neighborhood of scattered small farms is quite similar to the nucleated neighborhood of small farms in most respects, but they differ in important features. The scattered small-farm type is most commonly found in mountainous regions, along the valley floor of steep-sided hills, and tends to be more isolated than the nucleated type, because of poor quality roads that are impassable by most motor vehicles. As a result, the residents are farther from public transportation. The houses tend to be located farther apart, invariably on land that is worked, whereas in the nucleated type, some residents in the nucleus have farm plots elsewhere. However, access to public transportation does not necessarily indicate that a neighborhood will become integrated and nucleated. In the case of Bananal in the município of Barbacena, small farmsteads were scattered in a valley away from the paved highway, while the bar (bus-stop), chapel, and school were located next to the highway, relatively far from the farms (see Figure 8).

The size of holdings is in the range of 2 to 25 hectares, with larger sizes predominating. The number of families tends to be fewer than in the nucleated type: usually from ten to twenty. As a result,

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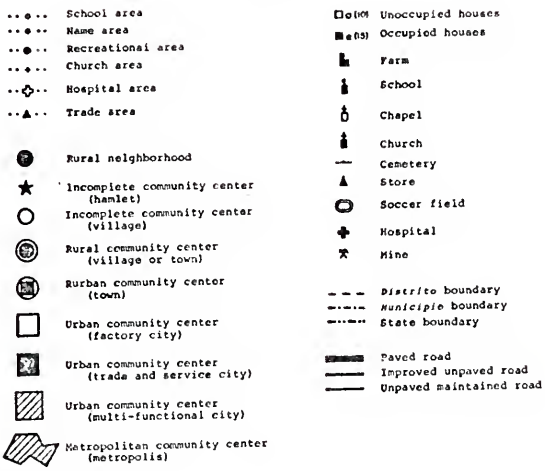
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Recreational area
Church area
Hospital area
Trade area
Rural neighborhood
Incomplete community center (hamlet)
Incomplete community center (village)
Rural community center (village or town)
Rurban community center (town)
Urban community center (factory city)
Urban community center (trade and service city)
Urban community center (multi-functional city)
Metropolitan community center (metropolis)
Unoccupied houses (00)
Occupied houses (05)
Farm
School
Chapel
Church
Cemetery
Store
Soccer field
Hospital
Mine
Distrito boundary
Municipio boundary
State boundary
Paved road
Improved unpaved road
Unpaved maintained road

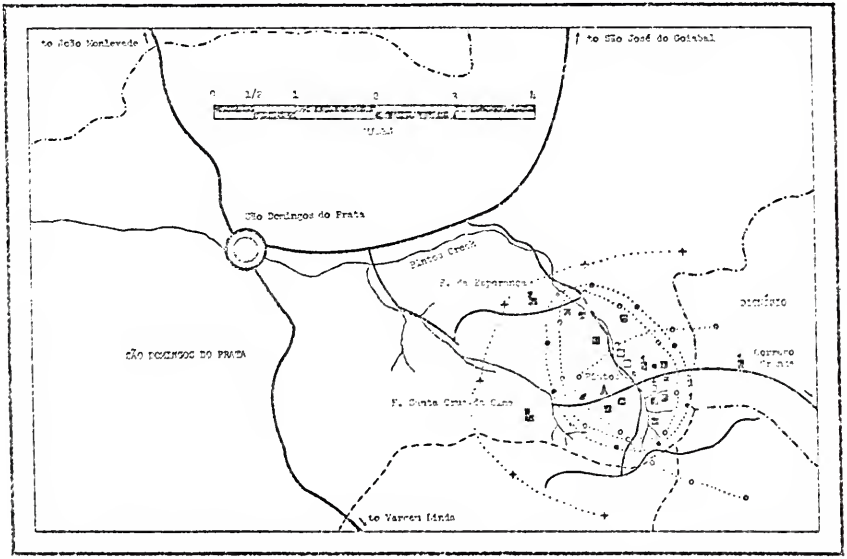

Figure 7. Major social areas in the neighborhood of Pintos

the neighborhood supports fewer institutions. Almost all scattered small-farm neighborhoods have either a chapel or a school, or both, serving as a focal point for social interaction. These buildings tend to be located in open country settings apart from each other within the neighborhood. Sometimes the chapel and the school are found close together, but the bar or the store is usually located elsewhere, on a good road or at least on a trail accessible to a road. This type of rural neighborhood is almost exclusively based on subsistence agriculture; lack of roads does not encourage production for market. In general, the level of living is lower than the level in the nucleated type of small-farm neighborhood, and the frequency of purchases of store-bought goods is less.

Because of a small number of families, kinship ties often extend beyond the neighborhood into nearby localities. Mutual aid in farm work, tool lending, health care, and visiting is the basis of important integrative patterns within the neighborhood. In these cases neighbors are bound together because of mutual isolation. Due to poor roads, there is less recourse to outside help, even in times of emergency, and these neighborhoods still exhibit the strong self-dependency of an earlier period. Like the nucleated neighborhood, the scattered-farm neighborhood has an annual religious festival, a time of cooperative action and renewed solidarity. The visits of the priests and nuns are about the only contact with the outside.

São João Batista is representative of the neighborhood of scattered small farms, and a case study of it is presented to clarify points already made.

São João Batista

The neighborhood of São João Batista in the município of Barbacena, near the border of Barroso, derives its name from a chapel dedicated to this saint. In many respects it is a typical neighborhood of scattered small farms. It is situated on the least desirable land in an extremely irregular and remote part of the landscape. There was no nucleated settlement at the chapel site. This whitewashed structure, of simple design, was situated on the highest hill in the area, surrounded by a barbed wire fence that also enclosed the school building, formerly the casa *paroquial*.

A winding road leading to the chapel was very rough, with deep ruts and holes. Ordinarily cars did not use this road, but proceeding cautiously, it was possible to drive it without incident. The roads did not pass by the houses; these are connected by trails. Eroded ruts in the main road mount the hill to the church, disappearing across a field. At a Y-intersection near the base of this hill, a fork of the road veers off sharply to the south, across pastures and fazendas, through woodlands, until it reaches a paved highway that connects Barroso to Barbacena. This point was an hour's walk from the chapel. The only other means of transportation was a horse or a horse cart. The school teacher, who boarded in the home of a pupil, made the two and one-half hour trip by horse cart and bus to Barbacena only on weekends.

The *sitios* were scattered in valleys among the hills. The houses of the *sitiantes* were spread out, near streams that provided water for the residents. There were, the author was told, eleven

occupied and three unoccupied houses in the neighborhood. Several fazendas were located between São João Batista and the paved highway, although they were medium-sized holdings not requiring many day laborers.

The material culture of the people of São João Batista seemed more limited than that of neighboring Caetés. Children were more poorly dressed, and all but one were barefoot. The school building was smaller and in poor repair, not whitewashed in a long time. The interior of the schoolroom was dark, since the only light was provided by opening the door and the shutters of two small windows. The room was crowded with old, poorly kept desks. School supplies were short, and little was available locally. There were no motor vehicles in the neighborhood, although there was a truck and a jeep on nearby fazendas. Bicycles were not owned or used here, because of the rough terrain. Housing and domestic furnishings were similar to those in Caetés.

The main institution integrating the neighborhood is the chapel, the oldest institution in the area and a source of pride in the neighborhood, since it attracted visitors from several neighborhoods in the municípios of Barbacena, Barroso, Carandaí, and Ressaquinha. The chapel was quite active; mass was said once a month, and nuns visited on Sundays when mass was not said. An organized *irmandade* (religious brotherhood) charged with the care of the chapel and the image of the patron saint directed the religious festival of São João on June 24, the high point of the year. A permanent building for the festival, with booths used for selling foods, coffee, and drinks, was located inside the chapel enclosure. A cemetery which served the residents of neighborhoods patronizing the chapel was regularly maintained.

The school was a relatively recent addition to the neighborhood and therefore lacked the broad base of community support found in Caetés. No local persons were qualified to teach, and the teacher was a normal school graduate from Barbacena. There were no secondary school students in the neighborhood. Use of the school building, which still belonged to the church, had been allowed by the priest, but the building was too small for meetings or parties.

Kinship ties within the religious service area of the chapel included the neighborhoods of Caetés in Barroso, Loures in Carandaí, Corrego de Ressaquinha in Ressaquinha, and Burace and Alfrede Lopes in Barbacena. There were no strict post-marital rules, the priest reported, and a newly married couple tended to go where a greater economic opportunity existed. Thus there were new men in São João Batista from Alfrede Lopes and Caetés, who lived on and worked land inherited by their wives. Patterns of visiting, mutual aid, and godparenthood serve to reinforce kinship ties.

A small bar on the road leading to the paved highway was shared with residents of the neighborhood of Alfrede Lopez. This bar and the bar in Caetés were the commercial establishments nearest to São João Batista, but not conveniently near. Many residents preferred to go all the way to Barroso or Barbacena if they were to make the effort to leave the neighborhood.

A delineation map of major social areas of São João Batista is shown in Figure 8.

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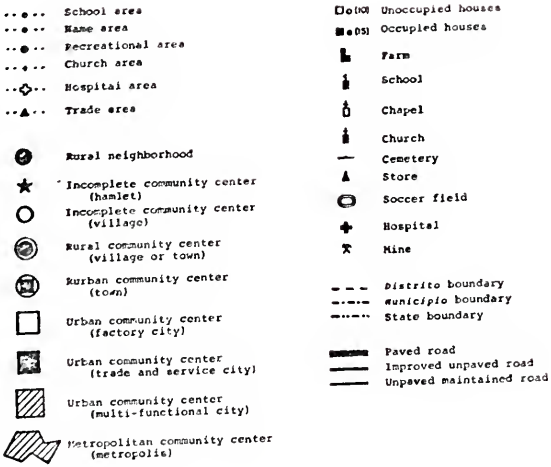
School area
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Hospital
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Municipio boundary
State boundary
Paved road
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Unpaved maintained road

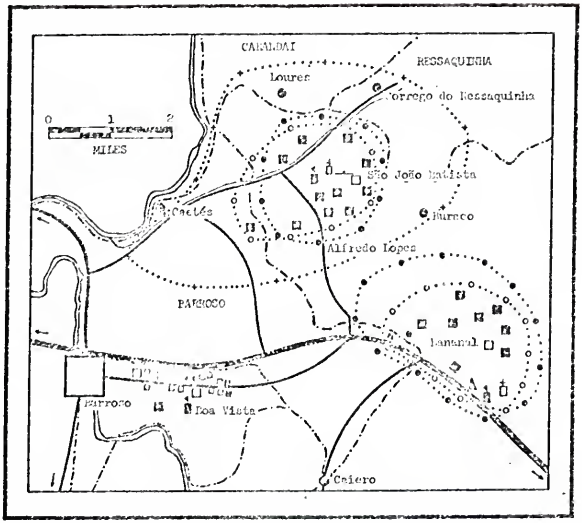

Figure 8. Major social areas in the neighborhood of São João Batista

Summary

After this analysis of the varieties of rural neighborhoods, the interrelationships between levels of localities can be clearly seen, even in a simple description of life styles. Although all three types of rural neighborhoods are found in the metropolitan community system, in individual cases the ecological relationships of neighborhoods with higher-level locality groups vary depending on how near or far neighborhoods are from towns, cities, and the metropolis. The neighborhoods remote from urban centers are more strongly linked, in many instances, to local villages that supply needs beyond what is provided in the neighborhood. A discussion of incomplete or partial rural communitites, of which rural neighborhoods often form a part, is the subject of the next chapter.

NOTES

1. T. Lynn Smith, *Brazil: People and Institutions*, 4th ed. (Baton Rouge: Louisiana State University Press, 1972), p. 431.

2. Smith, *Brazil*, p. 433.

3. Charles Wagley, *An Introduction to Brazil*, rev. ed. (New York: Columbia University Press, 1971), p. 144.

4. Wagley, *Introduction*, p. 216.

Chapter 5

Incomplete Communities

This chapter discusses the incomplete community, the level of locality group that is just above the neighborhood. After definition of the concept of incomplete community and of the criteria for selection of examples and methodology, two sub-types of incomplete communities discovered in the Brazilian data are presented in case studies of each sub-type. This discussion of sub-types focuses on a description of the nucleus and of the structural relationships between nucleus, rural neighborhood, and individual farm families in the surrounding area.

The Concept of Incomplete Community

Although rural neighborhoods are always found as components of rural communities, in some cases there is an intermediate level of locality group, the *incomplete community*, that provides services and social interaction complementary to the rural neighborhood. This chapter reviews the data gathered on locality groups too large and complex to qualify as neighborhoods, in order to locate and identify a significant category classificatory of group which are too large in population and yet lack certain institutions and services necessary to classify these groups as communities. This level of locality group was identified long ago by Carle C. Zimmerman and discussed by T. Lynn

Smith, who stated the reasons why it can be called neither a neighborhood nor a community.

> Its population is too diverse, its members are not sufficiently in contact with one another, and those residing in the locality are too much involved in several smaller and mutually exclusive circles, for the group to qualify as a primary group. Therefore, it is not entitled to be called a neighborhood. On the other hand, it definitely does not qualify as a community. . . . [since] the institutions and services . . . are too limited in range and too restricted in number. . . .[1]

Two major types of incomplete communities found by the author in the metropolitan community of Belo Horizonte are distinguished as (1) those centering in a hamlet and (2) those centering in a small village. The nuclei of incomplete communities, in contrast to those of nucleated rural neighborhoods, are given official designations by the Brazilian government: *povoado* and *vila*. Agro-pastoral economic activities predominate, but in many cases these are supplemented by extractive industries. Compared with neighborhoods, a larger proportion of residents in the nucleus are agricultural laborers who go out to work on fields in the surrounding area. The populations of these little centers are stagnant or declining because of rural-urban migration.

Criteria for Selection and Methodology

The incomplete communities studied are from the same physical regions from which rural neighborhoods were selected within the metropolitan community of Belo Horizonte. Campos da Mantiqueira, Alto São Francisco, and Siderúgica.

The methodology used in delineating socially significant boundaries for incomplete communities included personal observation and interviews with priests, merchants in the hamlet or the village, other residents of the small center, and persons living on farms and in neighborhoods surrounding the area. The same type of maps used for the study of rural neighborhoods was used in the study of incomplete communities, and similar questions were asked about institutions and services. Data on integration with higher-level localities are reserved for analysis in a later chapter.

Incomplete Communities with Hamlets as Centers

The hamlet-centered incomplete community is similar to the nucleated neighborhood of small farms: it supports a small range of institutions, tends to be located on poor roads, and has a small population. However, it differs from this type of small-farm neighborhood in the magnitude of these features and in the presence, usually, of some rural neighborhoods within its area of influence. For example, although its roads are poorly constructed and maintained, they are somewhat better than roads found in rural neighborhoods, and the population of the hamlet itself, ranging from 150 to 250 inhabitants, is larger than the population of most rural neighborhoods.

The occupations of residents tend to be more diverse than those in the rural neighborhood. Nearly every hamlet has a full-time storekeeper. Moreover, its primary school usually has two or more classrooms and offers a full four years of primary instruction. However, because of the lack of priests (see Chapter 4), the chapels in these hamlets

receive about the same number of visits from the parish priest as chapels in rural neighborhoods. Attendence is larger in the hamlet, however, because the parishioners are drawn from a wider rural area and a larger nucleus. There are usually several stores (*vendas*) that have a more diverse stock of merchandise than the *boutiquins* in the neighborhoods, but the *vendas* serve as social-clubs to about the same extent as the latter. Most of these hamlets have been designated as *povoados* by the Brazilian Institute of Statistics and Geography (IBGE). *Povoado* is not an administrative classification, but the designation does recognize the more intense religious and commercial functions of these small places in comparison with the neighborhoods.[2]

Pitangueiras

The *povoado* of Pitangueiras is located in the *município* of Prados, to the west of Barroso in the region of the Campos da Mantiqueira. The hamlet is much nearer to the *sede* of Barroso than to that of Prados. Located in rolling highlands and surrounded by cattle *fazendas*, Pitangueiras is south of a paved highway that links Barroso and São João del Rei, on a trail-like dirt road that winds through pastures and then doubles-back to the paved highway. The trip from the *povoado* took fifteen minutes by car and thirty minutes on foot. Although the road to Pitangueiras was under the jurisdiction of the município of Prados, the only maintenance was provided by local residents who repaired it when it became "impassable."

The hamlet is a line settlement along the road, consisting of fifty houses, a chapel, a soccer field, a two-room município school, a limestone mining operation, and a large well-kept store. The store

was stocked with staples (rice, beans, and manioc flour) and a few simple agricultural tools and supplies. The ever-present bar sold cachaca, beer, soft drinks, and sundries, but the store did not handle dry goods.

The population of Pitangueiras amounted to approximately two hundred persons. Occupations of its residents included in addition to teaching and agriculture: quarry owner, laborer, truck driver, and full-time merchant. The proprietors of the quarry and of the store, members of the same kinship group, constituted a local upper class. They were high school graduates, and their children were sent to nearby towns for secondary schooling.

The material culture of this locality is more diverse than that of the rural neighborhoods. There were private generators for electricity in several locations, for instance, at the quarry, and there were several fairly elaborate homes in the hamlet. The more educated members of the locality bought newspapers in nearby Barroso, while most of the people kept in touch with the outside world through battery-powered radios. There were seven trucks, one car, and a Volkswagen bus. The material culture of the workers is similar to that found in rural neighborhoods.

Institutions that contribute to the integration of the locality have both primary relations and secondary associations. For example, in the school, three of the four teachers were from Prados, the seat of the município; only one was a native of the locality. Most students were from the hamlet, and the other were from farms in the surrounding area. The school had morning, afternoon, and evening sessions.

Evening classes were part of the adult literacy campaign. The locality was large enough to fill the two classrooms in two day sessions, but the adult classes had been poorly attended and might be discontinued.

The limestone quarry sold to two large companies, a cement factory in Barroso and a steel mill in Rio de Janeiro. At times, officials from the two companies visited the quarry. The seven trucks in Pitangueiras were individually owned and were employed by the quarry owner to deliver the product to the two companies.

The chapel was under the responsibility of the priest from Barroso, and mass was celebrated once a month. The chapel is dedicated to Nossa Senhora da Conceicão (Our Lady of the Conception), and the annual festival in her honor comes on December 8. Persons from the nearby communities of Barroso and Prados were often in attendance.

Pitangueiras had an active soccer team that competed throughout the region with teams from large rural and small urban communities, including Barroso, Prados, and Barbacena. The people were proud that their soccer team had become known.

There was no telephone or mail service in Pitangueiras, the nearest being in Barroso. The *prefeito* of the município of Prados rarely visited Pitangueiras, but people went to the seat to see him and to demand repair of the roads and other services. Rarely were their petitions granted. However, the residents agreed that the school was well staffed and received adequate attention and supplies.

The store provided most persons with things needed daily, but longer-term requirements had to be obtained elsewhere. Male residents of the hamlet congregated at the store, but persons from the scattered

farms went there infrequently and did not socialize readily with persons who lived in the hamlet.

A map delineating the incomplete community of Pitangueiras is shown in Figure 9.

São Sebastião de Campinas

The hamlet of São Sebastião de Campinas is located within the rurban community of Dores de Campos, on a município road that passes through the fazendas and leads to the município of Carandaí in the northeast. It is quite isolated, even from the town of Dores de Campos, seat of the município, because the road is in very poor condition. It took from two and one-half to three hours on foot, an by bicycle, an hour on horseback, or forty minutes by car to go from São Sebastião to Dores de Campos. There were five bicycles and two cars in the *povoado*, which served as a small trading center for some surrounding rural neighborhoods.

There were thirty houses in the hamlet, two stores, a chapel, a soccer field, a one-room município school with two functioning bathrooms, and a weekly market. The stores and the market attracted persons from the surrounding open country. The population of São Sebastião de Campinas was approximately one hundred and fifty persons. The occupations represented were: small farmer, teacher, full-time store owner, agricultural laborer, and buyer of produce. These occupations were less diverse than those in the more populous and less isolated settlement of Pitangueiras.

The institutional integration of the locality is based largely on educational, religious, and commercial functions. The chapel was

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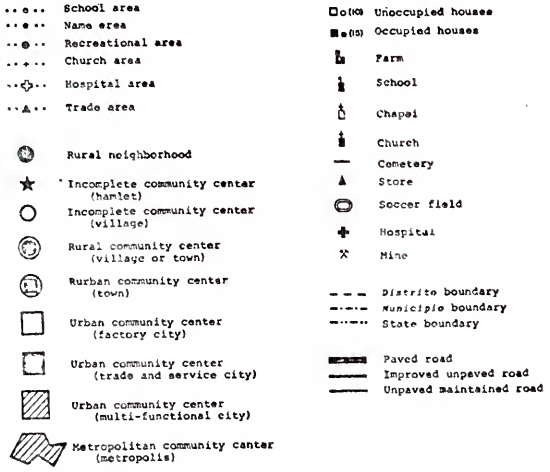
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Church area
Hospital area
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Rural community center (village or town)
Rurban community center (town)
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Urban community center (trade and service city)
Urban community center (multi-functional city)
Metropolitan community center (metropolis)
(40) Unoccupied houses
(15) Occupied houses
Farm
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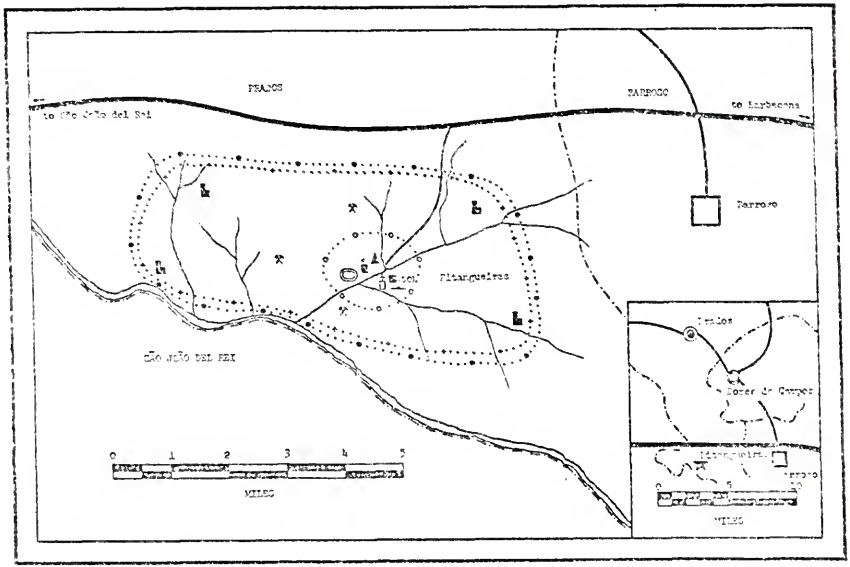

Figure 9. Socio-ecological boundaries of the incomplete community of Pitangueiras

active, and the priest from Dores de Campos said mass there every other week, drawing parishioners from Carandaizinho, where mass was said only once a month, and from Tabuleiro, which had no chapel, as well as from scattered farmsteads and other neighborhoods in the area.

The market was held on Sunday, and the small-holders in the area brought produce to sell to fellow residents. All the staple foods were sold there. On Wednesdays there was a regular pick-up in São Sebastião de Campinas of eggs, chickens, and homemade cheeses to be taken to Carandaí and from there to Rio de Janeiro. A local resident functions as the buyer of produce, picking up products and paying for them at the farm.

The school was the only school in the northeastern part of Dores de Campos, and it drew students from territory having a radius of at least four miles. Many children from outside the município attended this school. Students came from the distant neighborhoods of Tabuleiro, Moiroẽs, Porteiro, and Palmito. The teacher, a local person, lived in São Sebastião. Only one other person from the locality had gone to secondary school, and she resided in the town of Dores de Campos. A number of young men had migrated to Rio de Janeiro and São Paulo in search of work.

A map delineating the incomplete community of São Sebastião de Campinas is shown in Figure 10.

Incomplete Communities with *Vilas* as Centers

In contrast with the hamlet-centered incomplete community, the small village-centered incomplete community lacks but a few functions

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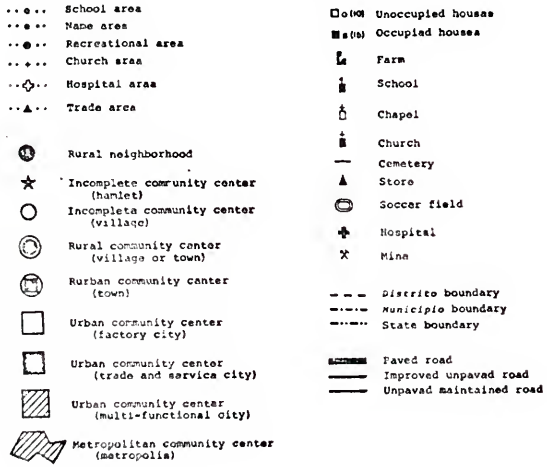
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Urban community center (trade and service city)
Urban community center (multi-functional city)
Metropolitan community center (metropolis)
Unoccupied houses
Occupied houses
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School
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Municipio boundary
State boundary
Paved road
Improved unpaved road
Unpaved maintained road

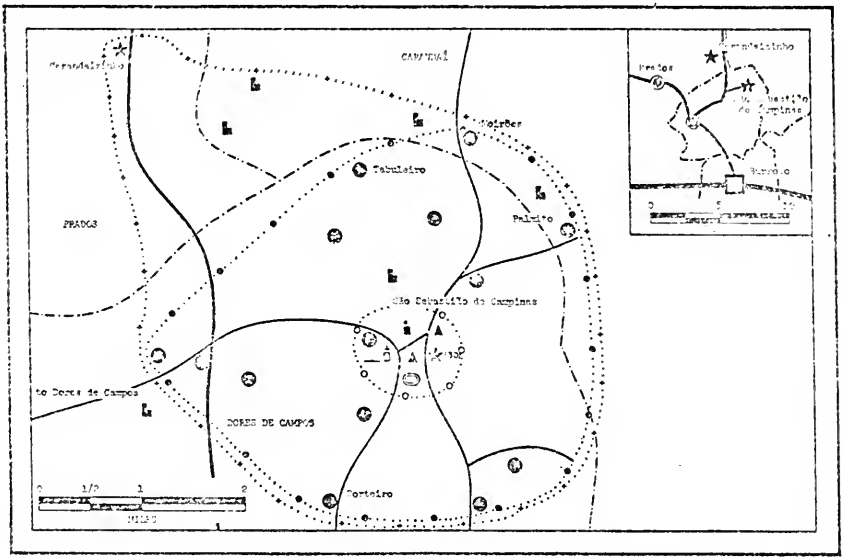

Figure 10. Socio-ecological boundaries of the incomplete community of São Sebastião de Campinas

that would make it a true rural community. Unlike the hamlet, the small village is located at the center of a road network connecting it to satellite neighborhoods and to one or two larger villages or towns. Usually, the smaller village is the seat (*sede*) of an administrative district called a *distrito de paz*. The *sede* of such a *distrito* is called a *vila*.

The small vilage has a larger resident population and consequently more habitations, institutional buildings, and streets than in the *povoado*. Here the rudiments of urban services are frequently found: electricity, running water, sewage systems; postal, telephone, and bus service. However, these services were utilized by a small fraction of the population of the locality (including the hinterland) and less than half of the residents of the *vila* itself.

According to the census of 1970, 75 percent of *vilas* in Minas Gerais have populations ranging from 201 to 1,000 persons. Of the six *vilas* visited by the author, the average population was 475 inhabitants; the lowest was 205 in Emboabas, and the highest, 725 in Rio das Mortes.

Occupational diversity is somewhat greater in the *vilas* than in the *povoados*; this diversity is caused by the presence of employees of state and município, those who work for urban services, and those with jobs at the state-operated school. Economic activities found in the village-centered incomplete community include the agro-pastoral activities, which are still dominant; retail trade, and collective and extractive industry, including charcoal making, lime processing, and quarry operations.

The material culture is as simple as in the *povoado*, but a few more cars and trucks are found in the *vila*, and additional urban services

provide a higher level of living for some inhabitants.

The institutions present in the *vila* are more diverse than those in the *povoado*. In addition to chapel and school, there are usually several general stores, a health post, a soccer field, and a few voluntary associations. Of the latter, the *irmandades* (brotherhoods) charged with the care and maintenance of the chapel and the promulgation of religious festivals are especially important; there are also 4-S clubs, equivalent to 4-H clubs in the U.S.A., for the young.

The chapel usually has a *casa paroquial* maintained by local residents for lack of a resident clergyman. The festival of the patron saint is the high point of the religious year.

The school often is operated by the state government. As a result, the facilities are better maintained, the teachers better trained, and food and school supplies more readily available than in município schools, primarily because of better funding and regular visits made by state inspectors of primary schools.

Health posts are usually under the auspices of the state government, and they are staffed one or two days a week by doctors and nurses from nearby communities. The health posts are supported by the state governments with some assistance in funds from the município and federal and international sources.

In addition to priests, nuns, *prefeitos*, and school inspectors, the most frequent visitors to the *vila* are traveling salesmen (*vendedores ambulantes*), who travel by truck or on burros carrying wares such as leather goods (shoes, horse gear), cloth, sewing notions,

clothing, and housewares not normally available in the general store of the *vila*. The salesmen come once or twice a year, staying a couple of weeks. They pitch their tents in a public place and lay out their wares of customers to see and purchase. Representatives of development agencies located in the larger cities make periodic visits to the *vila*; among these representatives are ACAR agricultural agents, who initiate demonstration projects for small-holder who live in the open country, and ACAR social service workers, who encourage "communitarian" endeavors, such as sewing clubs, 4-S clubs, leadership development, and short courses in hygiene and nutrition.

Padre Brito

The *vila* of Padre Brito in the município of Barbacena, 8 miles south of the city of Barroso and 21 miles west of the city of Barbacena, was an early settlement called Ilheus long before Barbacena was founded. It was called Ilheus, a corruption of the word *alheios* (meaning foreigners), because it was settled by Portuguese immigrants during the gold rush of the early eighteenth century. It became the seat of a *distrito* in 1856; about 1900 its name was changed to Padre Brito in honor of a local priest.

The roads leading to Padre Brito were in poor condition, but one road leads from the *vila* north to Barroso, another goes east to Barbacena, and third to the south connects with Ibertioga, seat of a municipio. The *vila* itself had no bus service, but buses traveling the state road from Barbacena to Caxambu via Ibertioga stopped at Ponto Chic, center of a rural neighborhood 7 miles south of Padre Brito.

The road to Barbacena was maintained by two município employees, residents of Padre Brito, but work was rarely done on the other roads.

A small stream flows through Padre Brito, providing a source of water for the inhabitants. Water, of doubtful quality, was piped to about 10 percent of the homes, and an employee of the município of Barbacena was assigned to care for this water system.

The census of 1970 listed 349 as the population of the *vila* of Padre Brito. Most of the residents who were employed were agricultural laborers or wood gatherers. In addition, there were four employees of the município and two full-time general storekeepers. The occupational categories are enlarged by outsiders who came to the *vila* frequently: the two state school teachers, the health post doctor and nurse, the traveling salesmen, the school inspector, the *prefeito*, and the priest. A total of seventy-five houses were located in Padre Brito, of which sixty-five were occupied.

Almost all members of this locality were of lower class status, because members of the upper class, such as fazendeiros, no longer lived full-time in the *distrito*. However, there is a correlation between surnames of sponsors of the annual religious festival and the names of traditional fazenda owners, as shown by old maps. Seemingly then, descendants of fazendeiros still serve as leaders of the *vila*.

There were few cars in the locality. During the author's visit, he saw only two vehicles besides his own. One of these, an ancient Volkswagen bus, belonged to a resident of the village, and the other, a jeep, to a Japanese truck farmer (who said that he also owned a small truck). Fazendeiros who owned land in the locality of Padre

Brito usually lived in Barbacena and visited their farms in personal vehicles: cars, jeeps, or trucks.

The *vila* of Padre Brito was laid out in a grid pattern (showing its colonial origin), with chapel, school, stores, and some homes facing each other across the main street. There were four north-south and two east-west streets (one the main street). The surfaces of the streets were irregular; it appeared that at some time in the past they had been paved with cobblestones. However, many stones had been removed, weeds had grown up, and erosion was much in evidence.

A number of institutions were located in the *vila*, including a three-room school, a soccer field, a chapel, a *casa paroquial*, two general stores, and a health post. The school was run by the state government, and the teachers commuted from Barbacena. The residents expressed dissatisfaction with the attendance of the teachers and the provisions made for the school lunch program. However, the full four years of the primary series were offered, one teacher taking the first and second years and the other, the third and fourth years. The students all lived within a half-hour's walk to the school, coming from the *vila* and a nearby rural zone.

The chapel is the most important integrative institution of the locality. It was equipped with a "bandstand" for auctions, a *casa paroquial* where the priest stayed on his visits, and a cemetery, as well as a large parcel of land in the center of the village. The priest who had charge of the chapel was based in Ibertioga. He visited the chapel once or twice a month. A local woman noted for her religious devotion led catechism and *tercos* (prayers) in his absence. The

festival of São Jose, the patron saint of the chapel, is marked for March 19, but in 1973 it was celebrated on the weekend of March 17 and 18. On the first day the public festival included music by a band from Barroso; a prayer service, followed by fireworks; and an auction of "donated gifts" for the benefit of the chapel and to defray the costs of the festival. On the second day, Sunday, two masses were celebrated; live animals were auctioned off; the procession of São Jose took place; and the festival was closed with a sermon and benediction. Two auctioneers took part, and a festival commission made up of fourteen local residents defrayed the initial costs and collected the donations. During the festival, fazendeiros and others came from Barbacena, Barroso, and Ibertioga. Normally, however only persons from the surrounding rural areas came to the chapel for services. This number included many from Ponto Chic, although the people there intended to build a chapel of their own.

The health post, recently set up by state ACAR representatives from Barbacena, in cooperation with the município government and the United Nations Childrens Fund, had not been established long enough to attract a wide constituency. Although local residents welcomed the additional service, they were so accustomed to inconvenient and unavailable health care that they had not yet fully utilized the service.

The two general stores, supplemented by traveling salesmen, provided goods to meet many of the needs of local residents, although agricultural tools, seeds, and fertilizer had to be obtained in Barbacena. The usual gathering of sociable men was found in one store, talking about the weather, the need for improvement in the local school

and the roads. The store had the only telephone in the village. The proprietor of this store told the author that the village had mail service twice a week by an employee of the município.

The soccer field was still in fairly good condition, but Padre Brito had had no team for more than a year. The residents interviewed said that many of the young men who had been on the team had left the locality to take jobs in urban and metropolitan centers, especially Barroso, Barbacena, Ibertioga, São Paulo, and Rio de Janeiro.

The delineation of the locality of Padre Brito is shown in Figure 11.

Summary

These materials about the structure and integration of some of the incomplete communities within the metropolitan community of Belo Horizonte make it evident that these localities offer a broader range of services than the rural neighborhoods. Nevertheless, they still lack certain institutions necessary for a complete social life, such as local government, specialized stores, gasoline stations, hospitals, banks, secondary schools, processing plants, repair shops, and markets for cash crops. The population is more diverse than in rural neighborhooods, both in terms of occupational categories and socio-economic status. As compared to the neighborhood, these communitites also have a greater degree of secondary relationships, because of infrequent contacts with the more isolated rural neighborhoods, the fazendeiros, and outside visitors.

The incomplete communities were declining because of changes in the conditions which had brought about their creation: decreasing isolation due to improved transportation facilities; exodus of the more affluent members of the locality group, thus lowering the ability of the incomplete community to maintain its institutions; migration of able workers to urban centers; and increased investment by local governments in the physical facilities located in the seat of the município. Nevertheless, these partial, or incomplete, communities remain an important part of the locality group structure of Minas Gerais.

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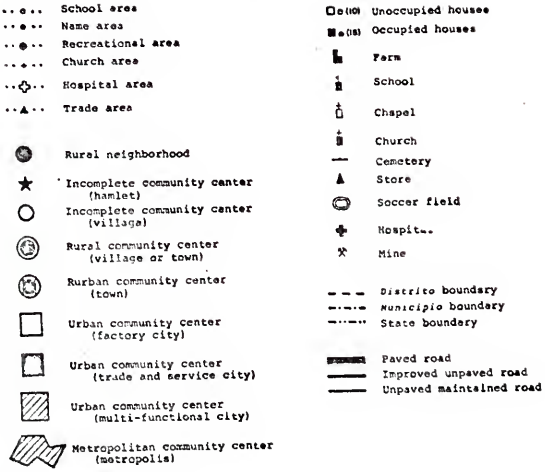
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Church area
Hospital area
Trade area
Rural neighborhood
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Incomplete community center (village)
Rural community center (village or town)
Rurban community center (town)
Urban community center (factory city)
Urban community center (trade and service city)
Urban community center (multi-functional city)
Metropolitan community center (metropolis)
Unoccupied houses (10)
Occupied houses (18)
Farm
School
Chapel
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Store
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Distrito boundary
Municipio boundary
State boundary
Paved road
Improved unpaved road
Unpaved maintained road

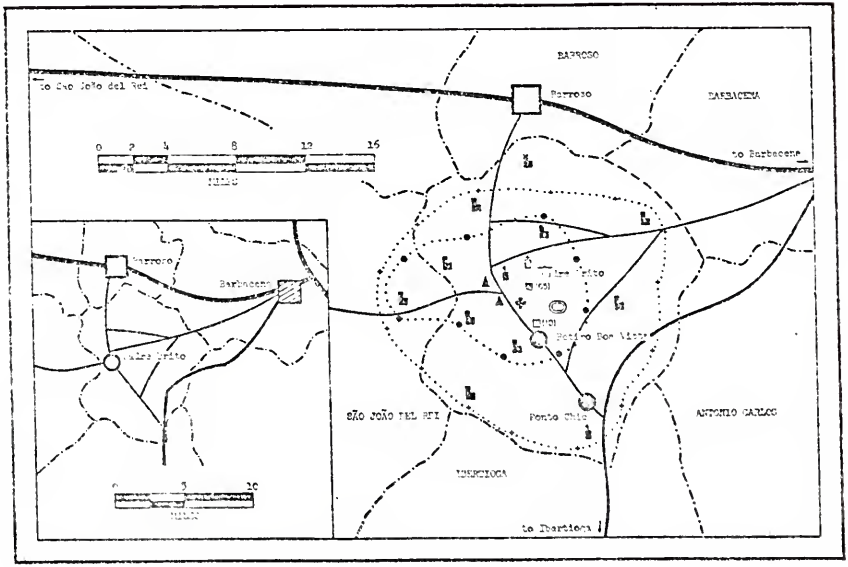

Figure 11. Socio-ecological boundaries of the incomplete community of Padre Brito

NOTES

1. T. Lynn Smith, *The Process of Rural Development in Latin America*, University of Florida Monographs: Social Sciences no. 33 (Gainesville: University of Florida Press, 1967), pp. 83-84.

2. T. Lynn Smith, *Brazil: People and Institutions*, 4th ed. (Baton Rouge: Louisiana State University Press, 1963), p. 429.

Chapter 6
The Rural Community

This chapter deals with the rural community. The concept of rural community is examined, and the concept of community in general is reviewed prior to an analysis of the nature of the rural community as a principal level of integration within the metropolitan community of Belo Horizonte. The discussion focuses on the integration of families living in open country areas with families living in the nucleus via shared institutions.

Visits by residents of the nucleus to the open country are reported, as well as visits by residents of the open country to the nucleus. A case study of the rural community of São Domingos do Prata is presented to show the ways that generalizations about rural community integration are demonstrated by actual practices.

The Concept of Rural Community

As an area of social interaction, the community differs from the neighborhood: it is larger in territory and often encompasses hundreds of families and as many as a dozen neighborhoods. It usually includes persons and families who are unknown to one another, who have little in common other than residence in the area and dependence on the same institutions and agencies for the satisfaction of basic needs. Hostility among community members is not unknown, but participation

in the ups and downs of the community's life and success is mutually felt. The community, unlike the neighborhood, is characterized by a social cohesion of an organic type, with interdependence among the residents attested by a higher degree of specialization of occupations and an increased number of secondary relationships.

The *rural community* as distinct from other types of communities is a locality group in which the dominant form of economic activity is agro-pastoral. According to T. Lynn Smith, "from the structural point of view, the rural communities of the world may be grouped into two large categories, or types: (1) the village structural type; and (2) the service center-farmsteads type."[1] The village structural type, in which rural workers and farmers reside in a village and commute daily to their fields, is the dominant feature of rural society in China and India and is also found in some European and Spanish-American countries. In Brazil and the United States the second type of rural community prevails. As described by Smith:

> [It] includes all of the cases in which the homes of the farm families are dispersed amid the fields, pastures, and woodlands used by the members of the community, with most of the farm residences being at some distance from the village or town which serves the commercial, ceremonial, recreational and other social and economic needs of those belonging to the particular locality group.[2]

Thus, in most parts of Brazil and the United States the rural community is composed of two parts: a village or town service center and an open country area including incomplete communities, rural neighborhoods, and scattered farms found within that area. The center is highly dependent on the patronage of residents of the surrounding open country for the maintenance of its institutions.

Rural Communities in the Metropolitan Community of Belo Horizonte

The service center-farmsteads type is the dominant form of rural community within the metropolitan community of Belo Horizonte. As indicated above, the ecological structure of this type is composed of two parts. The first part is a center whose services are utilized by a majority of residents in the center itself and in the open country. The primary functions of the center are: (1) as a residence for occupational specialists, i.e., professionals, bankers, merchants, and artisans; (2) as the location of administrative, economic, educational, health, religious, and recreational enterprises, institutions, and agencies; and (3) as a focal point for the convergence of social and economic activities of the specialists and the institutions which are primarily engaged in serving the population of the open country. The second part of the ecological structure of the rural community is an open country area which serves as the economic producing area and as the residence of the majority of the population.

In the economic sector the service center is the location of producer's cooperatives, for external marketing, and *feiras*, or weekly markets, for internal marketing. These marketing services for agricultural products, e.g., especially milk cooperatives, are sometimes multi-functional self-help organizations. For example, in the village of Christiano Otoni, the milk cooperative provided specialized agricultural commodities and supplies through its retail store, as well as received and shipped milk. Other cooperatives have hired veterinarians

to care for the animals of members, and some have purchased farm machinery for the joint use of members. Besides marketing institutions, the center provides business establishments unavailable in lower-level localities, including banks, furniture stores, clothing stores, appliance dealers, tool and equipment shops, pharmacies, and gasoline stations. The village also has the services of cargo-carrying trucks, some owned by individual truckers and others, by producer's cooperatives, which transport agricultural products out of the community.

The service center provides a variety of basic services and public utilities not immediately available to residents of hamlets and the open country part of the rural community. Bus service is regular in every rural community center, allowing for contacts with visitors in the center and with residents in other communities. Telephone and mail services are used by those living in village or town or in open country to keep in touch with kin who have left the community. Employees of various agencies keep in contact by telephone and by mail with headquarters in other communities. Many of the institutions of the rural community center, including the hospital and the milk cooperative, require dependable electric current, a supply of water, and communications facilities in order to function adequately.

Occupational specialization in the village or town is much greater than that found in the rural neighborhood or the incomplete community. This diversity serves to increase the interdependence between the village or town and the open country area. Resident professionals include doctors, dentists, pharmacists, lawyers, agronomists, veterinarians, secondary school teachers, priests, and ministers. Not

all of these are present in every rural community. For example, in Dom Silvério, there was a priest, an agronomist, a pharmacist, two doctors, and three dentists as well as a number of secondary school teachers. However, there were no lawyers, no veterinarians. Other occupational specialities found in the rural community center often include tailors, seamstresses, barbers, hairdressers, accountants, photographers, watch repairmen, cobblers, automobile mechanics, and carpenters.

The availability of health care in the village or town center attracts those who live in the open country to the center. This important social service is a recent addition to the traditional institutions of religion and education found in the rural community. In addition to a doctor or two, these communities often have a small hospital or at least a health post. In Prados the small hospital owned by the church was served by only one doctor. A dentist from a nearby city came weekly to use the hospital as a clinic.

Religious homogeneity has been a traditional and continuing focus for community integration. The mother church of the Catholic parish, or *matriz*, is found in the rural community center, along with the resident of the priest. Numerous chapels in the open country are under the control and guidance of the priest. However, small congregations of Protestants, known to Catholics as *crentes*, are sometimes found in the village or town, but usually only one or, at most, two denominations are represented in a given community. For example, in Prados there is a small congregation of Presbyterians that had no resident minister but was served infrequently by a minister from a city in

the area. A few Spiritists lived in the community, but they had no local organization; they attended meetings and services in another community. The non-Catholic religions are very sparsely represented in open country areas of rural communities.

The center of the rural community usually has a secondary school (*ginásio*) offering work from fifth to eighth years. It may operate under private, state, or church auspices. Rarely is it operated by the *município*, because most rural municípios have a very small budget for educational purposes. The *ginásio* is patronized by the children of *fazendeiros*, tradesmen, and professionals as well as a handful of the brighter, more ambitious students from rural areas and from families of the working class in the village or town. Fazendeiros frequently send their *filhos de criacão* to school as a part of the obligation of rearing them. Many fazendeiro families reside in these small rural population centers in order to take advantage of better levels of living, of more ready access to institutions, especially schools, and of more social contacts.

Most of the nuclei of rural communities are seats of the county-like municípios. The control of this local governmental unit is in the hands of those living in the population center, and most of its local revenues are spent in the *sede* itself, on small parks and *pracas*, paved streets, lighting, and public buildings. The fazendeiros usually form an influenctial political force, and they encourage local governments to improve the município's farm-to-market roads. Because of their divided loyalty between the farm and the village or town, fazendeiros also take pride in physical improvements in the *sede* which bring

greater prestige to their município and make the seat itself a more attractive and comfortable place for their families to live.

The center of the rural community has some recreational facilities, such as movie theaters where programs are shown on weekends, central squares where young people congregate, and social clubs where the elite gather. The plaza is a place where people from the open country spend time during visits to the center after attending church or shopping. These centers sometimes have small hotels or several *pensãos* (lodging homes) which serve visitors from other places. Usually these are the only places a stranger can get a meal, for restaurants as such are unknown. Visitors from the farms usually take along their own food or eat with relatives or friends when they come to the center. In some of the nuclei of rural communities, there is no place for an outsider to eat. In Resende Costa, for example, the author found no restaurant, hotel, or *pensão;* in Piedade do Rio Grande there was only a *pensão* for travelers.

Annual festivals in the center attract people from rural neighborhoods and from open country areas. Often the government of the município sponsors parades and public celebrations on secular holidays such as September 7 (Independence Day) and Carnaval (a pre-Lenten street celebration). Religious holidays, especially festivals of a *matriz*'s patron saint, Christmas, and Holy Week, are the dates of important celebrations in rural communities, but these are usually sponsored by the religious brotherhoods rather than by the local government.

People from the rural neighborhoods now go to the nuclei more frequently than in the past. As pointed out above, fazendeiros' families now rarely live on the *fazendas*, having their permanent residences in the centers of rural communities. The poorer rural classes, too, now have greater opportunities and necessities for visiting the village or town center. They must go there to market any agricultural surplus, either at a weekly market, if there is one; at a cooperative; or by selling from door to door. Residents of the farms must go to the center to purchase many items of food which they or their neighbors do not produce, such as salt, coffee, lard, oil, and sugar, as well as manufactured goods, such as pans, tools, kerosene, cloth, clothing, and shoes. If they belong to a cooperative which pays by check, they use the services of the local bank to cash these checks.

The health needs of those who live in the open country, if a health condition is serious, are attended to at the hospital, the health post, or the special clinics established especially for rural workers. These people do not seek medical aid unless the illness, accident, or other problem is causing great difficulty. A receptionist at one hospital said that most of the ailments affecting the rural people would not become so severe if ailments were attended to promptly. Typical complaints include such problems as gastric disturbances due to parasites or bad food and water; infections; cuts; pregnancies with complications; and dietary deficiencies.

Most residents of the rural zone attend mass on weekends several times a month at the *matriz* in a center. On these occasions they also visit any kinfolk who may live in the village. Some of

these kindred work as servants or live as *filhos de criacão* in fazendeiro families; others have jobs as employees on the município road or construction crews. To vote, residents of open country areas must go to the seat of the município.

As pointed out elsewhere, many of those who live in the nuclei of rural communities go, as a regular part of their activities, to farms in surrounding areas, to rural neighborhoods, and to hamlets in the incomplete communities. These visits serve to reinforce the social cohesion and interdependence among all members of the rural community. The priest regularly visits the rural chapels and sometimes says mass in rural school buildings. The *prefeito* visits at least annually in localities within the administrative area of his município. About half of the teachers in open country schools live in the village center and commute to their schools. Doctors and nurses make weekly or bimonthly visits to health posts in the *vilas*. Traveling salesmen from the village, or even from more distant towns, go into open country areas to serve and profit from a relatively captive market.

São Domingos do Prata

A good example of a typical rural community is São Domingos do Prata. In some respects it is larger and more complex than many rural communities, but the differences are few. This rural community is in the Siderúgica region. Its limits correspond closely with those of the município, which has a total population of 21,493, including 3,979 in the village of São Domingos do Prata. The economic base of the community consists of the production of the following (in order of commercial value): milk, charcoal, manganese ore, and vegetables.

These economic activities have stimulated an improvement in the system of roads within the community. Although as yet there were no paved roads in the community, the dirt roadways connecting São Domingos do Prata with the centers of other communities have been improved enough during the last two decades to allow trucks and buses to travel these routes. In addition, intra-município roads had been widened and graded to facilitate the daily pick-up of milk from outlying fazendas. Milk trucks traveled six routes daily, picking up milk cans and passengers along the way. As a result, the social interaction among persons living in the open country and in the nucleus had increased.

The village had many services and agencies that served the people living on farms in open country areas of the community. In the commercial and service sector, there were two banks, two pharmacies, two gas stations, two mechanics' shops, six bars, several grocery stores, four butcher shops, an agricultural supply store, a shoe repair shop, and two producer's cooperatives. There also were some establishments not generally patronized by most persons from the farms: a lumber yard, a newsstand, a bakery, a lawyer's office, a tailor shop, a barber shop, an accountant's office, a seamstress, a photo shop, a watch repair shop, a carpenter shop, and three *pensãos* with restaurants. Eighty-eight school teachers lived in the village, fifteen of whom taught in the *ginásio*. The village had a central water system (piped but not treated), a sewer system, 174 telephones, mail service, and electricity provided by a state electric company. The bus service connected São Domingos do Prata with neighboring towns and cities and with Belo Horizonte.

The health establishment was fairly well developed for such a small community. It included two doctors, eight nurses (non-graduates), a lab technician (biochemist), a dentist, two "practical" dentists (not graduates of dental school), a midwife, and a forty-eight-bed hospital run by a philanthropic brotherhood under the auspices of the church. In the open country portion of the community, there were numerous midwives and one health post. Traditionally, residents of the surrounding area have found it difficult and expensive to use the village's health facilities. The hospital was founded only in 1961. Since then, due to recent health campaigns by social service workers and the affiliation of small farmers with the cooperatives, the utilization by rural residents of health facilities in the village has increased.

For example, because of health insurance coverage extended to members of the fruit and vegetable producer's cooperative, the wives of small farmers were having their babies delivered in the village hospital instead of by midwives in the open country zone. However, the village midwife was still used by the poorer part of the village population, which had no coverage, but her services were not used by more affluent residents of the village or by fazendeiros.

The habit of putting off professional medical consultation until an affliction becomes a matter of life or death was still the rule among persons who lived outside the nucleus of the community. At the hospital the author discovered that the chief causes of death in the community were cardiac arrest, acute gastric disturbances, acute parasitic attacks, and acute malnutrition, most of which could be controlled by preventive medicine and prompt attention. A problem

in this context is the lack of emergency transportation. São Domingos do Prata is typical of most rural communities in lacking ambulance service.

The village had the only secondary school, *ginásio*, in the community. It offered work from the fifth through the eigth grade. Members of the professional and the commercial classes disliked sending their children to other communities to attend secondary school, and members of the lower middle class could not afford to do so. The fazendeiro class also utilized the *ginásio*. Often, those who still lived on the fazendas sent the children to live with relatives or godparents in the village while they went to school.

There were two Catholic houses of worship in the village, the *matriz* and a chapel. In addition, there was an Afro-Brazilian *macumba* cult, whose place of worship was called a *terreiro*, and two Assembly of God churches, one in the village, one on its outskirts. These three non-Catholic religious establishments were patronized by a small number of the less affluent residents of the village. Residents of the open country usually attended services at the *matriz* on weekend visits to the village. The priest in São Domingos do Prata was responsible for so many chapels in the neighborhoods and on the fazendas that some were never visited. One of the *vilas* within the community, Vargem Linda, had had a parish church, but it too was serviced by the priest from São Domingos do Prata.

The priest had been very active in organizing the rural neighborhoods into effective production units within the fruit and vegetable cooperative, which he started to help small farmers market their produce.

Produce stores had been set up by the copperative in the village of São Domingos do Prata and in four other locations, including the nearby town of Nova Era and the steel and mining towns of João Monlevade, Coronel Fabriciano, and Ipatinga. The store in São Domingos do Prata was located in a church building alongside the headquarters and offices of the cooperative.

There were ten religious festivals a year, of which the most important were Holy Week, the month of May, and the feast of the patron saint, São Domingos. All of these were occasions when persons from the farms visited the village. Although three *pensões* and three restaurants were associated with the village, these were not used by persons from the open country portion of the community, and thus these eating places served primarily the *viajantes*, traveling salesmen representing state and national firms.

In São Domingos do Prata visits of farm residents were important for recreational purposes. Traditionally, the lack of good roads and of available transportation severely restricted the frequency of such visits (usually for business as well as for recreation). With a greater availability of transportation due to the establishment of milk truck lines and bus service, persons from the surrounding area were able to get to the village anyday in order to shop, meet medical or dental appointments, do their banking, take care of business with the cooperative, market their products, or attend a festival or meeting. Usually, open country residents enjoyed such visits because, they said, the village has "*movimento*," always something to do and someone to meet on the streets and in public places. Nevertheless, the average

person from the open country still restricted his visits to the village to weekly or bi-monthly occasions, because of the cost of a ride. Cr. $1.20 (19 cents) by bus or Cr.$1.00 (16 cents) by milk truck was still felt as quite expensive. Thus, visits with a recreational function were not usually undertaken solely for that purpose.

Some agencies in São Domingos do Prata provided services that were unavailable elsewhere in the community. The Sindicato Rural dos Trabalhadores (Union of Rural Employers) had offices in the village, as did the federal and state tax collectors and the state police, here an eight-man force assigned to the município. (There are no local police in small Brazilian communities.) A judge and a prosecutor were located in the village. A small município library of two hundred books was found in the city hall. Some of these agencies were used more by the fazendeiros than by the *sitiantes* or the agricultural workers. For example, the fazendeiros were more likely to be involved in litigation, especially civil court cases involving property disputes, than the *sitiantes* and the farm laborers, who were most involved with activities of the Sindicato Rural dos Trabalhadores. Clearly then, the involvement of open country residents with institutions of the village of São Domingos do Prata was intense and frequent.

The social cohesion of the rural community of São Domingos do Prata was strengthened by the visits of villagers to the countryside. In addition to the priest, whose activities in the surrounding area have been discussed above, a number of persons worked outside the village under the auspices of the church; these workers included nuns, social service workers, and agricultural technicians. Two nuns and a

young woman from a rural neighborhood who worked with them formed a team for rural social assistance. Their activity had been primarily in organizing rural neighborhood leadership, starting sewing and 4-S clubs, and encouraging health and hygienic practices. The agricultural technicians had been paid by the church to give short courses on fruit and vegetable crops to members of the cooperative which the priest had organized.

Among the fazendeiro class were many kinship ties between the villages and the open country. These ties were reinforced by the visits of village kinfolk to the fazendas. In one family, for example, the lab technician, the *prefeito*, and the director of the secondary school were all related to a fazendeiro of São Tomé (previously mentioned) and made regular visits to that fazenda. These persons owned automobiles, and this allowed for frequent visits to the countryside. Often they were nostalgic about childhood experiences and associations on the fazendas, but they also stated that the rigor and lack of comfort of fazenda life left them with no desire to stay longer than a day.

Among public officials who visited rural neighborhoods were the state and município school inspectors and the *prefeito*. The visits of the município school inspector to rural schools were irregular and depended on the interest of the *prefeito*, who is his superior. On the other hand, the visits of the state school inspector had to be made at regular intervals, every few months, according to the regulations of the state education department. The *prefeito* himself visited areas outside the village during election campaigns and on occasions of

special events, such as local religious festivals. The possibility of such a visit, however, depended on his interests and constituency.

Religious, hospital, secondary school, and trade area boundaries all nearly coincided with the administrative boundaries of the município of São Domingos do Prata, although in the cases of hospital and trade boundaries, these areas somewhat exceeded the administrative boundaries.

In Figure 12 the socio-ecological boundaries of the rural community of São Domingos do Prata are delineated.

Summary

The rural community seems to be replacing the rural neighborhood as the most significant level of social solidarity for the majority of rural people, who still outnumber residents of rurban, urban, and metropolitan centers in the metropolitan community of Belo Horizonte. The institutions of the rural community center, a village or a town, rely on the patronage of persons who live on small farms, on fazendas, and in hamlets. Limited industry in the village or town center creates an intense interdependence among the agro-pastoral and extractive enterprises of the open country areas and the livelihood of those who live in the village or small town. The center offers a sufficient variety of trade, services, institutions, and agencies to provide for the basic needs of a vast majority of residents of the open country as well as for the needs of the center itself. During the past two decades many of these provisions have been made more available to persons living outside the village or town. In this period the efforts of local, state,

and federal governments have done much to make rural community centers attractive and accessible to persons who reside in the countryside, through the construction of roads and bridges, the provision of health and educational programs, the establishment of banks, the extension and improvement of public utilities, and the sponsorship of artistic, religious, and cultural activities.

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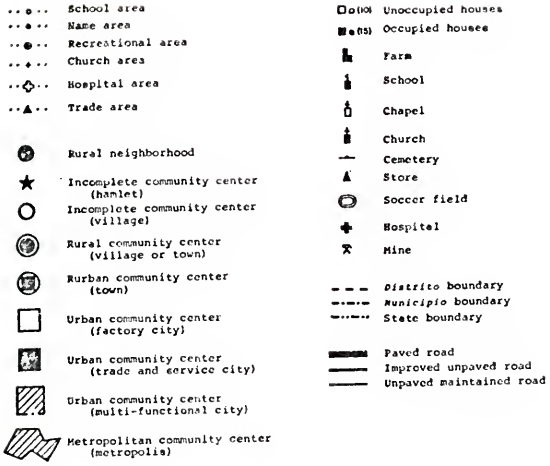
School area
Name area
Recreational area
Church area
Hospital area
Trade area
Rural neighborhood
Incomplete community center (hamlet)
Incomplete community center (village)
Rural community center (village or town)
Rurban community center (town)
Urban community center (factory city)
Urban community center (trade and service city)
Urban community center (multi-functional city)
Metropolitan community center (metropolis)
Unoccupied houses
Occupied houses
Farm
School
Chapel
Church
Cemetery
Store
Soccer field
Hospital
Mine
Distrito boundary
Municipio boundary
State boundary
Paved road
Improved unpaved road
Unpaved maintained road

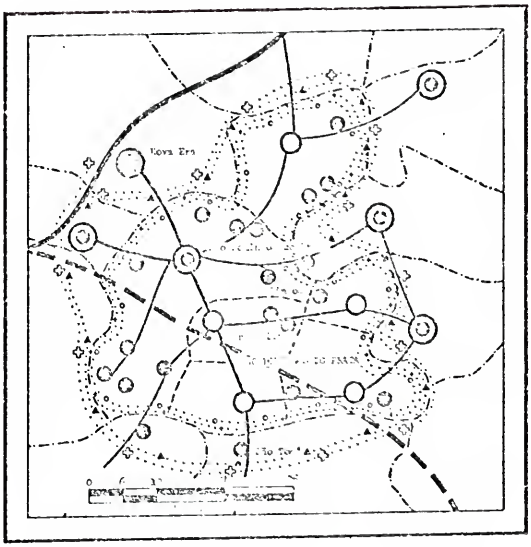

Figure 12. Socio-ecological boundaries of the rural community of São Domingos do Prata

NOTES

1. T. Lynn Smith, *The Process of Rural Development in Latin America*, University of Florida Monographs: Social Sciences no. 33 (Gainesville: University of Florida Press, 1967), pp. 79-80. The existence of this type of rural community was first demonstrated by Charles Galpin, *The Social Anatomy of an Agricultural Community* (Madison: Wisconsin Agricultural Experiment Station, 1915).

2. Smith, *Process*, p. 80.

Chapter 7
The Rurban Community

In this chapter the concept of the rurban community is defined and discussed as a category of locality group intermediate between a rural and an urban community designation. The contrasts and similarities between the rural and the rural community are presented using data from the metropolitan community of Belo Horizonte. An in-depth case study of the rurban community of Pompeu illustrates the points made in general discussion, especially emphasizing the integration of the nucleus and the open country. Finally, major factors are selected and presented which appear to be leading to further development of this level of locality group in Brazil.

The Concept of Rurban Community

As mentioned in Chapter 2 the term *rurban community*, first employed by Charles Galpin, refers to locality groups more complex than rural communities, yet lacking the functional diversity characteristic of urban communities. First, the term *rurban community* refers to locality groups that can be considered true communities. Second, this type of community exhibits a balance between the importance of economic activities in the nucleus and that of such activities in the open country. Specifically, economic activities of the nucleus, such as manufacturing, processing, trade, commerce, transportation, communications,

professional and other services, are relatively as important to the community as open country activities, such as farming, stock-raising, mining, fishing, hunting and other collecting enterprises. Typically, the rurban community population is in balance, approximately half residing in the nucleus and the rest, in the surrounding countryside. This type of community exhibits strong interdependence between the nucleus and the open country, based on specialization of functions and division of labor between those who produce food and raw materials and those who work in processing, transforming, and service industries in the nucleus. Since both urban and rural economic activities are of equal importance, neither sector is predominant in the social life of the community.

The Rurban Community in the Metropolitan Community System of Belo Horizonte

In the metropolitan community of Belo Horizonte the rurban community is the next higher level of locality group above the rural community. Each rurban community includes incomplete communities and rural neighborhoods within its community area. However, such an area need not include rural communities. The reason that one or more rural communities will not always be found within the territory of a rurban community is that these two levels are similar in functional and institutional makeup and therefore tend to compete with, rather than complement, each other.

In a number of ways the rurban community is similar to the rural community in the Belo Horizonte region. The nucleus of the rurban

community, like that of the rural community, is usually the seat (*sede*) of a *município* and serves as the administrative center as well as a focal point for the convergence of social and economic activities of the community. The rurban town, like the rural village, usually has a parish church, one or two secondary schools, a hospital, a number of specialty stores, banks, and a variety of professional and other services. The open country portions of both rural and rurban communities are peopled by those engaged in agro-pastoral and collecting activities who patronize the institutions and services of the nucleus.

On the other hand, there are important contrasts between rurban and rural communities. Unlike the rural community, the population of the rurban community is approximately equally divided between town and open country. However, a community with a larger population in the town may still have the economic balance characteristic of the rurban community, since persons living in town sometimes work in the open country and since many town activities complement those of the country. Especially in many rurban communities with small territorial areas, more persons live in town than in the open country. Some residents of the town work in open-country collecting and farming enterprises, and the "urban" activities of the nucleus are closely related to agriculture, stock-raising, and collecting.

Another important distinction between rural and rurban communities is that in the rurban the number of certain institutions and services existing in both levels of locality groups, such as hotels, *pensões*, stores, clubs, and commercial enterprises, is larger. Furthermore, the rurban community has a fuller range of professional and

institutional services than the rural community. Of course the most important contrast between the rural and the rurban community appears in the structure and balance of economic activities. Often the rurban community acts as a substitute for the functions performed by urban communities in areas where towns and cities are less accessible to rural residents. Instead of acting simply as a food production area for more distant population aggregates, the rurban community provides jobs and services to rural residents through a complex economic structure.

A comparison between territorially large and territorially small rurban communities shows how the balance in economic activities varies among rurban communities. In the small rurban community of Dores de Campos, seventy small workshops and factories produce leather purses, suitcases, horse gear, shoes, slippers, army uniforms, and tents. In other respects, Dores de Campos is similar to the nucleus of a rural community. As in the rural community, milk, cheese, and butter are produced for outside markets, but unlike the rural community, the majority of agricultural production goes to feed residents of the rurban community area. In a second case, the larger rurban community of Carandaí, a number of manufacturing operations produce lime, calcium carbide, talcum, gravel, terra cotta pipe, roofing tiles, and mica for electronic use--all of which are less labor intensive than industries in Dores de Campos--and unlike Dores de Campos, the rural population is involved in marketing agricultural and mineral products outside the community: chickens, milk, cheese, corn, roses, beef, pork, vegetables, and limestone.

These differences between Dores de Campos and Carandaí seem to occur because Dores de Campos is more isolated from main paved highways and has a smaller territorial area, a higher population density, and a higher proportion of town residents among its population. Nevertheless, both communities are more complex than rural communities. The importance of town economic activities in Dores de Campos is approximately equal to that of open country activites, thus both communities qualify as rurban.

In rurban communities of large territorial area, like Carandaí, two rural zones of social and economic interaction with the town are discerned. The first zone consists of rural neighborhoods and incomplete communities that are physically close enough to the town for rural residents to visit, work, and trade there on a daily basis. The second zone consists of rural neighborhoods and incomplete communities too far from the town for such daily interaction. Residents of the second zone are likely to be weekly, rather than daily, visitors and shoppers in the town.

The smaller-territory rurban communities, such as Dores de Campos, are not as isolated from towns and cities as are the larger and more typical rurban communities. In these small-territory cases, a number of minor industries located in town support a population equal to or greater than the population of the open country. Often these communities have sub-divided agricultural lands to the limit of economic efficiency, and a surplus of rural workers is available for town employment. Small rurban communities near cities and larger towns have convenient markets for processed foods and other manufactured products of

town industries. For example, the case of Dores de Campos, as mentioned above, shows the development of a number of small, labor-intensive industries employing formerly rural residents of the community. Products are marketed through the nearby cities of Barbacena and São João del Rei, and some of the products eventually reach Belo Horizonte and other metropolitan centers. In the case of Carandaí, a fortuitous combination of locally available mineral deposits and excellent transportation facilities (both highway and rail) has led to the development of economically important manufacturing, processing, and transportation activities in the town, despite growing productivity and profitability in local agriculture and stock-raising.

Pompeu

The characteristics of rurban communities in the metropolitan community of Belo Horizonte can most clearly be seen in a typical community. The rurban community of Pompeu, with a large territorial area in the Alto São Francisco region, is used for illustration and analysis. In comparison with the município of Dores de Campos, which has 124 square kilometers, the município of Pompeu has 2,402 square kilometers. The community area of Dores de Campos, somewhat larger of course than its administrative area, is quite small, because it is situated in a region with many competing towns and cities located relatively close together. Pompeu, on the other hand, is relatively far from other cities and towns.

Typical of territorially large rurban communities, Pompeu can be descibed ecologically as having two zones of influence, a daily zone and a weekly zone. In the weekly zone are a number of relatively

isolated rural neighborhoods, including Laranja, described in Chapter 4. The *vila* of Silva Campos, the nucleus of an incomplete community, lies within the daily zone. Social and economic interaction with the town of Pompeu was intense in Silva Campos. For example, the priest visited the chapel there more frequently than any other rural chapel in the area. In addition to the chapel, the *vila* had a limited number of institutions and services, including a six-room state school, a pharmacy, a telephone, a *cartório*, a justice of the peace, eight small stores, and a mill for cleaning rice. As the result of a limited range of local institutions, many from Silva Campos were daily visitors to the *sede* of Pompeu, since the *vila* was in walking distance of the town and serviced by buses and milk trucks twice daily. Clearly, Silva Campos had not developed into the center of a rural community because of the competition and the close proximity of the rurban town of Pompeu.

That the limits of the rurban community of Pompeu corresponded closely to the boundaries of the administrative unit of the município added to the bonds between rural and urban portions of the community. Because the economic activities of the open country were as important as those of the town, the needs and wishes of person in the farming area tended to be taken into account in administrative policies.

The balance between economic activities in the rurban community of Pompeu was reflected in the interdependence of town and open country economic activities. The open country area produced milk, beef, rice, corn, beans, cotton, and fish as well as trees for paper and charcoal. Most manufacturing and processing activities in the town were related to the processing of agricultural products. The milk cooling plant of

the cooperative, a cream-canning (*creme de leite*) factory, a creamery for making butter, and a milk candy (*doce de leite*) plant were all establishments for processing milk, the most economically valuable product of the community. In addition, the town had establishments for grinding corn meal, roasting coffee, making manioc flour, cleaning rice, and distilling cane liquor (*cachaça*). Other factories in the town were involved in the manufacture of cermaics, textiles, and furniture.

The farmers were quite dependent on services available in town. For example, *fazendeiros* engaged in producing beef cattle sold their beef by telephoning from town to stockyards in the metropolitan area of Belo Horizonte. (This is a town service; only four telephones had been installed outside the town, and only one of these was on a farm.) Also, since the majority of agricultural production in Pompeu was for market, farmers relied on town marketing services: ten wholesale representatives (mostly buyers of commodities) and the milk cooperative. The milk cooperative was the single most important marketing service in Pompeu. For members it provided, in addition to this service, veterinary services, tractor use, and purchasing privileges in the cooperative's store. Commercial and retail services available in Pompeu included two banks, a hundred stores, two hotels with restaurants, three *pensoes*, twenty-seven bars, a movie theater, two gasoline stations, and three pharmacies, all of which were utilized by residents of the open country as well as by those living in the town. Since the town of Pompeu had more than eight thousand inhabitants and since the cash income of town residents was generally greater than the income of a slightly larger number of rural residents of the município (9,265), the town population

probably had more purchasing power than the open country population. Nevertheless it is clear from interviews with store owners that without the patronage of rural residents, the number of commercial and service establishments which the community could support would have been quite restricted.

The following list of occupational categories in the town of Pompeu and in the open country (including villages and hamlets) shows the functional complexity of the rurban center compared with its hinterland.

OCCUPATIONAL CATEGORIES

Town Residents (number in category if known)

Accountant (3)
Agricultural extension agent (3)
Agronomist (1)
Automobile mechanic (2)
Banker
Carpenter
Contractors (2)
Dentist (5)
Doctor (4)
Domestic servant
Druggist (3)
Factory owner
Factory worker
Fazendeiro (landowning farmer)
Food handlers
Judge (1)
Lawyer (4)
Mayor (1)
Milk analyst (1)
Minister (2)
Non-teaching state employees (15)
Non-teaching *município* employees (120)
Nurse (4)
Office worker
Police sargeant (1)
Priest (1)
Prosecutor (1)
Salesperson
Seamstress (5)
Soldier (military police) (10)
Stonemason
Store owner-operator
Teacher
Truck driver
Veterinarian (1)
Wholesaler (10)

Open Country and Village Residents (number in category if known)

Agregado (sharecropper)
Charcoal maker
Vaqueiro (cattle herdsman)
Fazendeiro (landowning farmer)
Fisherman
Justice of the peace (1)
Primary school teacher (11)
Sitiante (small farmer)
Store owner-operator

A further indicator of the functional complexity of the center of the rurban community of Pompeu is the variety of institutions and agencies in addition to manufacturing, processing, commercial, and trade establishments found there, as shown in the following list. (Institutions not often found in lower-level locality groups are marked by an asterisk.)

Agricultural extension office*
Ambulance service*
Building contractor's office
Bus service
Catholic church
Department of Transportation regional office*
Electricity
Hospital
Judge and court (*comarca*)*
Lions' club*
Milk cooperative
Município government (town hall)
Newspaper*
Police (military)
Protestant church(s)
Secondary schools
Social clubs
State jail*
Taxi service*
Telephone
Union of Rural Workers health clinic
Water and sewage
Wholesalers*

An important contrast to be perceived between the nuclei of rural communities and the little urb of Pompeu results from increased social differentiation, a larger wage labor market, and a larger population in the center, all tending to give the town a more cosmopolitan and heterogeneous quality of life. Unlike the homogeneity of the rural village, reflected in housing style, types of stores and bars, and residential pattern, the center of the rurban community shows diversity. For example, in Pompeu the wealthier families lived in better quality, larger homes around the principal plazas near the center of town; the poorer families lived on the edge of town in smaller, poorly constructed houses. (In rural community centers, variety in quality of house construction is less extreme, and the settlement pattern is less segregated by class.)

Another key feature of the rurban community that parallels a feature of the rural community is the interconnection between town and open country resulting from mutual dependence on rural production for a significant portion of the wealth of the community. The dairy cooperative of Pompeu, which employed twenty persons, was important to the town as an employer, as a source of wealth, and as a specialized store. It also functioned to tie the fazendeiros to the town, paying them monthly by check which had to be cashed in a bank. At the same time the cooperative linked the rurban community to the outside market and thereby worked for improved roads from farms to the cooperative's cooling plant in town and from there to the processing plant in the big city of Sete Lagoas. The location of the state transportation regional office in Pompeu made this pressure for road improvements easier to apply. Small industries such as the cooperative had an important function in integrating the rural area with the town by employing former residents of the rural zone, thus tying them to urban institutions.

A map delineating the rurban community of Pompeu is shown in Figure 13.

Factors Favoring Rurban Development

To conclude the discussion of the rurban community, it should be emphasized that the number of rurban communities in the Belo Horizonte metropolitan community is smaller than the number of rural communities, but the revenue-sharing practices of federal and state governments are helping to increase the number of rurban communities. Furthermore the ethos of Brazilian cultural values that makes urban activities

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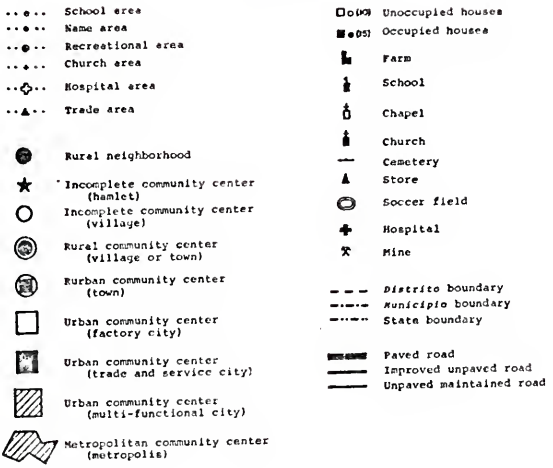

School area
Name area
Recreational area
Church area
Hospital area
Trade area
Rural neighborhood
Incomplete community center (hamlet)
Incomplete community center (village)
Rural community center (village or town)
Rurban community center (town)
Urban community center (factory city)
Urban community center (trade and service city)
Urban community center (multi-functional city)
Metropolitan community center (metropolis)
Unoccupied houses
Occupied houses
Farm
School
Chapel
Church
Cemetery
Store
Soccer field
Hospital
Mine
Distrito boundary
Municipio boundary
State boundary
Paved road
Improved unpaved road
Unpaved maintained road

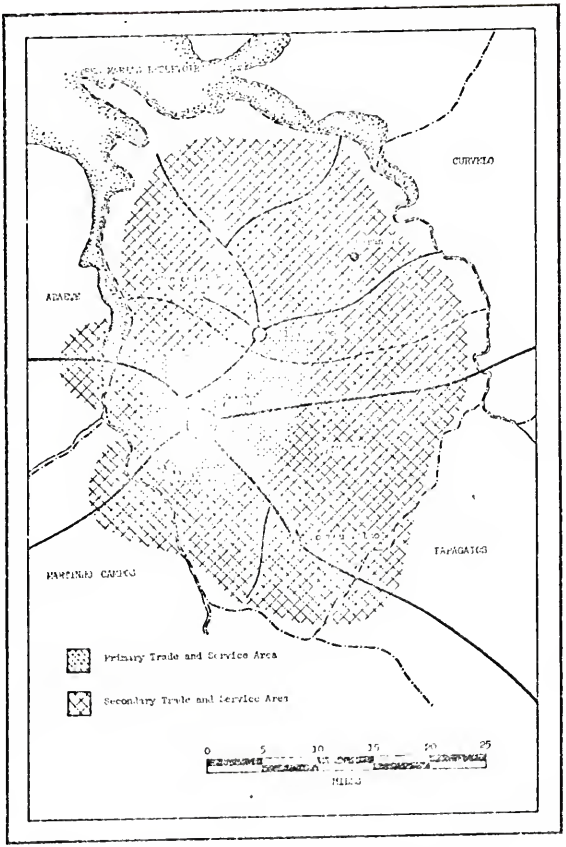


Figure 13. Socio-ecological boundaries of the rurban community of Pompeu

more prestigeous than rural activities leads local politicians to work at making their centers functionally more complex, with a wider range of industries, services, and agencies, to reflect local pride. A final and important factor leading the increase and growth of rurban communities is the growth of large urban and metropolitan centers, especially the city of Belo Horizonte, which has created increasing demand for agro-pastoral products, especially in processed form. The better road connections from urban and metropolitan to rurban communities have allowed for the growth of cash crop agriculture and processing industries in rurban communities.

Chapter 8
The Urban Community

This chapter deals with the urban community, the level of locality group just above the rurban community. For an understanding of the urban community in structure, function, and distinctive characteristics, the concept itself is first examined, and the relationships of urban communities to other locality groups are then analyzed. In the present study, urban communities within the metropolitan community of Belo Horizonte are differentiated into three sub-types: those with factory cities as centers, those with trade and service cities as centers, and those with multi-functional cities as centers.

An analysis of the essential features of these sub-types of urban communities is presented in the context of structure, functions, and integrating relationships with lower-level locality groups and the metropolis. Reasons for increasing growth during the past two decades in the number of urban communities in Belo Horizonte's metropolitan community system are examined in order to understand the factors which bring lower-level locality groups into the sphere of influence of urban centers.

The Concept of Urban Community

From an ecological perspective the *urban community*, as distinct from other types of communities discussed in this study, is a

structurally complex locality group characterized by a dominant city nucleus and a number of subordinate lower-level locality groups. The boundary of an urban community is determined by the attraction of available goods and services of the city to persons living in places farthest from the center, persons who nevertheless choose to go to that center in preference to a competing nucleus for reasons of economy in cost and time.

Many "urban community" studies have not used this comprehensive ecological concept of urban community. Generally these studies focus on only one part of the urban community, the contiguous built-up area or simply the administrative district of the city or town. As T. Lynn Smith has noted, few such studies have dealt with other key parts of urban communities, either lower-level locality groups or open country areas.[1] However, these parts are ecologically integrated with the urban center, since the social and economic activities of farmers and other residents of satellite towns, villages, hamlets, and open country areas surrounding the city are closely meshed with the activities of residents of the urban nucleus.

This ecological interdependence occurs because of a greater degree of occupational specialization resulting in a heterogeneous division of labor in the urban community. As a consequence, organic ties of social solidarity markedly predominate over mechanistic ties, in contrast with the lesser predominance of organic ties in rural and rurban communities. Nevertheless, non-agricultural activities dominate community affairs and policy determinations. Farmers have little influence on trade and service institutions, establishments, and agencies

in the city, although they are dependent on these organizations. Farmers and villagers are functionally part of the urban community, since they lack true self-sufficiency and depend on the services of the city for many necessities of daily life. The urban core, on the other hand, exhibits less dependence on the agricultural and rural parts of the community.

The Urban Community in the Metropolitan Community of Belo Horizonte

In the metropolitan community of Belo Horizonte all urban communities have certain features in common. The city is always the seat of a county-like administrative territory, a *município*. However, the territorial area of the urban community is ordinarily much larger than the center's own administrative jurisdiction and encompasses parts of as few as four and as many as thirty municípios, depending on the type of nucleus, its accessibility to lower-level communities via transportation links, and the number and complexity of nearby urban centers. The populations of nuclei of urban communities in the metropolitan community of Belo Horizonte range from 10,000 inhabitants in the smallest factory cities to 125,000 inhabitants in the largest multifunctional city.

These high-level locality group centers exhibit more clearly the urban attributes of population size, density, and heterogeneity than do rurban community centers. The city's physical facilities, such as paved streets, piped water, sewage treatment, and dependable electrical

power, are more fully developed. The more highly stratified social structure reflects the greater diversity in occupations, notably in the commercial and professional classes. This class differentiation is shown in the complex ecological structure of these cities. In the larger multi-functional cities the pattern of segregation in residential, industrial, and commercial areas is especially marked.

The nature of the relationship between center and community area in an urban community reflects specialized functions and characteristics of the center that tend to integrate the hinterland community area with the center. The city serves as a transportation hub for bus service connecting towns and villages in the community area to the center. This transportation system facilitates the city's function as a trade and service center for both primary and secondary areas of this hinterland area, providing the residents of the primary area with basic needs and residents of the secondary area with specialized goods and services not available in lower-level localities. The hinterland community area, in turn, supplies the city or town with some of its food and with raw materials used by manufacturing and processing plants in the city.

Urban communities can be divided into categories based on the territorial size of the community area, the nature of the center, the number of lower-level locality groups in the hinterland community area, the variety of locality group types in this area, the kinds of functional relationships between center and community area, and the number of competing urban centers within a particular region. Using these criteria, urban communities within the metropolitan community of Belo

Horizonte can be differentiated into three sub-types. The first type, the urban community with a factory city as nucleus, tends to have the smallest number of subordinate locality groups within its community area, and the institutions of the nucleus are primarily aimed at serving industrial workers, rather than residents of the community area. The second type, the urban community with a trade and service city as a nucleus, tends to have a greater number of subordinate locality groups (especially rural communities) than the first type, and the institutions of the nucleus, unlike those in factory cities, are primarily concerned with processing agricultural products and serving the needs of agricultural workers, farm owners, and residents of satellite towns, villages, and hamlets. The third type, the urban community with a multi-functional city as center, tends to have the greatest number and range of types of subordinate locality groups within its sphere of influence, and its institutions are diverse and specialized, reflecting the many functions and services it performs.

The Urban Community with a Factory City as Center

The observations made and the data gathered in visits to the urban communities of Itauna and João Monlevade, as well as a detailed analysis made after several visits to the urban community of Barroso, provided much of the descriptive information used in generalizing about the urban community with a factory city as its center.

An urban community with a factory city as center usually has a larger population in the nucleus than does the center of a rurban community. The number of residents ranges between 10,000 and 40,000.

SELECTED URBAN COMMUNITIES

IN THE

BELO HORIZONTE METROPOLITAN COMMUNITY SYSTEM

Urban Community	City Population* 1970 Census	Subordinate Rural, Rurban Communities
Factory city center		
Barroso	10,000	1
Itauna	33,000	3
João Monlevade	40,000	7
Trade and service city center		
Bom Despacho	20,000	6
Campo Belo	20,000	7
Oliveira	20,000	3
Ponte Nova	29,000	13
Formiga	30,000	8
Curvelo	32,000	8
Multi-functional city center		
Lavras	36,000	14
Conselheiro Lafaiete	46,000	16
São João del Rei	46,000	15
Barbacena	60,000	13
Sete Lagoas	62,000	14
Divinópolis	72,000	18
Governador Valadares	125,000	33

*Figures rounded to nearest thousand.

Commonly, one or at most two industries dominate the economy of the community. In Minas Gerais the textile, iron, steel, aluminum, and cement industries predominate in factory cities. Other small factories employing relatively few laborers are commonly found in the nucleus, often manufacturing furniture and processing food. However, the total number of types of industries in any one of these factory cities is small.

These industrial activities are made possible by the availability of transportation services and electrical energy in the nucleus. The road system connects the factory city to other urban centers and to the metropolis, Belo Horizonte, allowing for the marketing of industrial products. These products are destined for national markets requiring good roads for transportation to distribution points. Investors tend to locate factories in cities on or near paved federal or state highways giving access to major markets for their products. The industry often provides the city with a much higher tax revenue than is received by non-industrial towns of comparable or even larger populations, making possible the improvement of local roads as well. Factory cities always have regular, relatively frequent bus service to nearby localities, to other major urban centers, and to Belo Horizonte. Most of these cities also have railroad freight service, since the heavy industrial products which constitute the marketable export of these cities are more easily and cheaply shipped by rail than by truck, although both means are used.

The major industries of these cities are, usually, high energy users. As a result, although these cities are sometimes smaller in population than the other two types of urban centers, energy use in

factory cities is much higher. With the installation of a state-wide hydro-electric power system, factor cities were selected as sites for electrical sub-stations and redistribution centers, to the benefit of their hinterland community areas. For example, the steel city of João Monlevade in the Rio Doce valley provided cheap and reliable electrical energy to rural communities in its community area, such as São Domingos do Prata (see Chapter 6), supplanting less efficient local generation. On the other hand, non-industrial rurban towns, such as Pompeu (see Chapter 7), although much nearer the source of the power, the Tres Marias Dam, are not yet connected to the state-wide electric power system, CEMIG (Centrais Eléctricas de Minas Gerais, S. A.).[2]

The factory city has much the same trade establishments as the rurban town, with the addition of such specialized stores as building construction suppliers, hardware stores, lumber yards, jewelers, fabric stores, newsstands, and candy, fruit, and vegetable stores. Farm supply stores found in rurban centers are less likely to be found in factory cities, although they are occasionally. For example, one of the small processors in Itauna was a milk cooling plant which attracted a sufficient rural patronage to the city to support a farm supply store.

The factory city usually lacks certain services associated with rurban towns: those of blacksmith, agronomist, veterinarian, and milk analyst. However, a number of additional services are found in factory centers, such as commercial banks, photographers, funeral

parlors, watch repair shops, hairdressers, and trucking firms, as well as a number of occupational specialists, such as plumbers, engineers, factory managers, and medical specialists, including obstetricians and surgeons.

In addition to social institutions and activities which characterize rurban towns, the factory city generally has a larger, better equipped hospital, often supported by the major industry, as well as a high school, a technical school, a factory-supported health or first-aid clinic, a consumer's cooperative for factory workers, musical organizations (band or chorus), and a social work program (either religious or governmental). The factory city generally does not have producer's cooperatives or rural worker's health clinics, characteristic of rural and rurban community centers and other types of urban centers.

Ordinarily, factory cities, especially smaller ones, lack certain administrative agencies and institutions found in some lower-level localities. These include such agencies as ACAR, the agricultural extension service;[3] DER, the state department of transportation;[4] the court, judge, and prosecutor of the *comarca*; and the state jail. However, local government in factory cities customarily becomes more involved than governments in rural towns in active social programs for education, health, and sanitation, including water treatment, slaughterhouse facilities, and inoculation programs. Recreational activities and facilities, such as festivals, beauty pageants, and community centers, are more commonly sponsored by município governments in factory cities than by those located in rural villages or rurban

towns, since the cities have greater tax revenues to support such projects.

The local communications media existing in these factory cities, radio stations and newspapers, are another means for exerting urban dominance over the hinterland community area. In the larger cities the radio stations provide community residents with local news, entertainment, and information focusing primarily on events in the urban center. Weekly or bi-weekly newspapers are published in almost all factory cities and contain advertising and news of local interest.

As a result of the variety of activities which characterize the factory city, it tends to exhibit a heterogeneity that qualitatively differentiates it from rural and rurban nuclei. The industrial sector brings in specialists with managerial and technical competence from outside the community, creating differentiation in both occupational type and place of origin of inhabitants. The existence of a larger workers' class with regular salaries allows for the diversification and specialization of service occupations and institutions that depend on cash payments by patrons.

The social ecology of the little city exhibits greater complexity than lower-level centers, through the development of a pattern of resident districts of relatively homogenous social strata. Those engaged in trade, commerce, and non-professional service activities generally live above or behind their places of business in the center of the city. Workers' housing is often grouped near factory sites. In the case of large factories, the companies often provide uniform housing for their workers in districts convenient to the work site.

Managerial and professional inhabitants reside in enclaves farther from factory sites. In some places (especially one-industry cities such as João Monlevade) the company provides superior housing in more remote locations for upper income employees who use private automobiles to commute to work. The residential districts for recent migrants from rural areas and day laborers, who work both in the center and the countryside, whenever and wherever jobs are available, are found on the outskirts of the city and consist of groups of crudely constructed one- or two-room houses. The traditional upper class tends to have houses near the central *praça* as well as on *fazendas* or *chácaras* located near or on the edge of town.

The key to understanding the urban community with a factory city as center is found, not in analyzing the nature of the nucleus alone, but in determining how the nucleus interacts with its hinterland community area. In this type of community, lower-level locality groups and open country areas are integrated with the small city into social areas created by common dependence on certain institutions and services, some of which are not available in the nuclei of lower-level locality groups. The most important of these institutional areas of influence are those of commercial trade and service, church parish, newspaper circulation, and school, hospital, and bus services. Hinterland residents come to the nucleus to obtain the specialized services not available in lower-level localities. At the same time they often purchase goods or use services available in lower-level centers nearer their residences, since it is more convenient to do all shopping and errands in one trip to the higher-level center.

A case study of Barroso illustrates many of these characteristics of factory cities as well as how the city functions to link community area residents to other urban centers and the metropolis.

Barroso

Barroso is in many ways a typical small factory city, although in population it is smaller than most. Within the administrative boundaries of the município of Barroso were 10,995 inhabitants, as of the 1970 census, 90 percent resident in the center.[5] Recent estimates put the population nearer to 15,000 inhabitants. Barroso's major industry, cement production, was represented by only one factory, but it was the second most productive in Brazil and the cement was marketed throughout the country. Smaller industries included two ceramic factories, ten lime kilns, a small cheese factory, and five limestone quarries which supply the cement factory and other industrial customers, some as far away as the state of Rio de Janeiro. Together, all these enterprises employed fewer persons than the cement factory. A large number of independent truckers who contract to carry cement to various destinations also made up a significant part of the work force.

The small city of Barroso is located on a paved highway, midway between two larger urban community centers, the cities of Barbacena and São João del Rei. Regular and frequent bus service to Barroso from these two cities benefited residents of the community area of Barroso by allowing easy access to not one but two cities that provided a wider range of commercial and social services than Barroso. Barroso served as a transportation nexus for residents of its own community

area, who sought the specialized services of these and other larger urban and metropolitan centers; they had to come first to Barroso to take advantage of public transportation available there. Even bus service, which originated in subordinate centers such as Dores de Campos (see Chapter 7), was routed through Barroso on the way to and from Barbacena and São João del Rei. However, competition from Barbacena and São João del Rei acted to limit the territorial extent of the influence area of Barroso, especially in trade and services.

The locality groups which constitute parts of the urban community of Barroso include rural neighborhoods, such as Caetés, São João Batista, Bananal, and Boa Vista (see Chapter 4); incomplete communities, such as Pitangueiras and São Sebastião de Campinas (see Chapter 5); and a rurban community, Dores de Campos (see Chapter 7). These types of locality groups are integrated with the city of Barroso, creating an urban community through common dependence on trade and service facilities, school, hospital, and parish church. Each of these areas is discussed below in greater detail. A map, Figure 14, is provided for reference. The locality groups are differently integrated with the city, depending on the institution involved.

The most important feature of the urban community of Barroso that allowed for the development of functional community areas is the existence of a road system for internal transportation within the community. The community is bisected by a paved federal highway. Improved município dirt roads, suitable for bus and truck travel, connect Barroso with other towns and villages. Trail-like roads that received little or no maintenance except by users connect farms and

hamlets to the main roads.

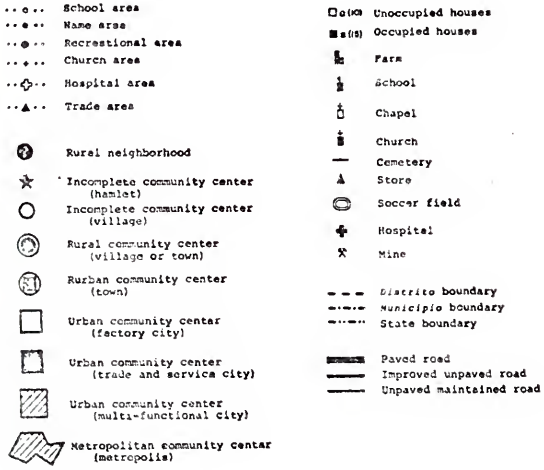
Many different means of transportation are used within the urban community to transport residents of the hinterland community area to the small urban center. The most important, of course, was bus service. A paved highway which bisects the community carried regular bus service from the neighboring municípios of Barbacena and São João del Rei. This external bus service also served an internal purpose, since residents of localities along the way could stop a bus along the highway and ride into the city of Barroso. This was common in Bananal and Pitangueiras. Residents walked twenty or thirty minutes to the highway to get a bus to the city. Dores de Campos was served by buses that traveled on its improved dirt road, not only connecting the town of Dores de Campos to Barroso, but also serving persons who lived in the community area between. (See map for delineation of the bus service area.)

Usually, the few automobiles using unpaved roads belonged to *fazendeiros* traveling to and from their farms. They sometimes gave workers from these farms rides into town, especially in emergencies. Cars traveling on paved highways often stopped to pick up hitch-hikers if they were acquaintances. The majority of cars were used almost exclusively in the city or in travel to other urban centers. Trucks were commonly seen on farm roads and trails. Although regular milk pick-up routes did not exist in Barroso, many fazendeiros had trucks or jeeps for taking produce to cheese factory or to market, and on these occasions, they often allowed workers to ride with them. Truckers who brought loads of limestone to the cement factory also

gave rides to rural residents, usually charging a small fee. Many small farmers, *sitiantes*, owned horses or mules, sometimes with a horse cart, buggy, or wagon, vehicles used to travel to the city. They usually did not pick up riders, since overtaxing the animal was an important concern to them. Bicycles were used in some parts of the community as a means of transportation to the city, but given the hilly terrain, only the strong and the young were known to use bikes with any frequency. The remainder of community residents, especially poor ones, walked to the city, as much as two hours in each direction, at least once a week. In emergencies, many persons spent as much as three or four hours walking to get help. The necessity to walk did not deter rural residents from getting to the urban center, but it did reduce the frequency of such visits.

The patronage area of the hospital in Barroso is the largest of all service areas delineated, as shown in Figure 14, since there wereno hospitals in any of the subordinate locality groups. The hospital in Barroso had an ambulance service which would pick up patients in rural zones, a relatively unusual type of service. As a result, the small hospital in Barroso sometimes got patients from rural localities that were nearer to the larger hospitals in Barbacena and São João del Rei. These hospitals did not have ambulance services, but they had more than enough patients from the cities they serve and from other localities, whose residents arrived by normal means of transportation. Barroso's hospital differed in several ways from hospitals in rurban communities such as Pompeu. It had the services of more doctors, and there was more use of the hospital, because

LEGEND


School area
Name area
Recreational area
Church area
Hospital area
Trade area
Rural neighborhood
Incomplete community center (hamlet)
Incomplete community center (village)
Rural community center (village or town)
Rurban community center (town)
Urban community center (factory city)
Urban community center (trade and service city)
Urban community center (multi-functional city)
Metropolitan community center (metropolis)
Unoccupied houses
Occupied houses
Farm
School
Chapel
Church
Cemetery
Store
Soccer field
Hospital
Mine
Distrito boundary
Municipio boundary
State boundary
Paved road
Improved unpaved road
Unpaved maintained road

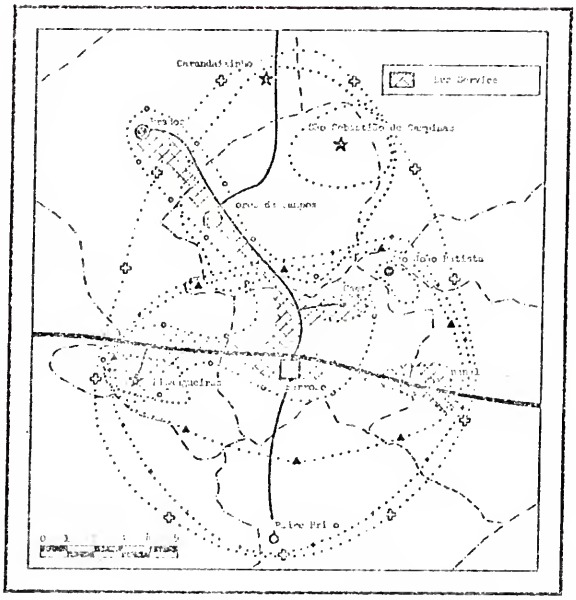


Figure 14. Socio-ecological boundaries of the urban community of Barroso

there was higher population density in the city. Better funding was available for hospital services due to contracts, *convénios*, made with industries and other large employers in the town, such as the município government, for the health care of employees.

The school patronage area is less extensive than that of the hospital. The rural primary school inspection district is limited to the município of Barroso's administrative jurisdiction. Due to federal legislation, primary schools must be built throughout the countryside in order to be no more than 3.6 miles from the home of the farthest student. Since primary schools are widely spaced, they tended to be focal institutions of rural neighborhoods. However, primary school inspectors and other local officials brought rural schools into the community sphere of influence in several ways. Besides visiting the rural schools, they held short courses in the city for rural school teachers. In addition, they provided some financial support in buying school supplies and foodstuffs. Rural and rurban towns and villages rarely had sufficient funds to spend on rural schools in this way.

The secondary school in the city of Barroso drew students from a much wider zone than the município jurisdiction, including all of Barroso, all of Dores de Campos, some of Prados, and part of Barbacena (in terms of município boundaries). Barroso's *colégio* offered the full college preparatory course and the terminal normal school course that allows students to enter the higher paid, white collar urban professions. Neither Prados nor Dores de Campos, however, had a full high school course. Both had secondary schools

that offered only four years' study beyond the primary grades (first to fourth), although Dores de Campos did offer a choice between traditional and technical courses. The secondary school in Barroso offered its teachers pay at the level of large urban *colégios* in Barbacena and São João del Rei, better than the pay offered in the *ginásios* in Dores de Campos and Prados. Therefore it attracted better teachers. The physical plant of the school was much larger and had more facilities for student use, for example, a library. The fact of readily available transportation from the community area to the small city allowed students to commute from lower-level localities on a daily basis--traditionally such *colégios* required boarding facilities--although some students did live with relatives in the city. A few, more affluent parents sometimes drove children to school in the center on a daily basis, while a young girl from Caetés, a rural neighborhood, commuted to Barroso on a bicycle (see Chapter 4). A number of students commuted from Dores de Campos by bus.

The retail trade and service area of the urban community of Barroso is of limited extent, primarily because of competition with larger urban centers nearby. The rural workers and the *sitiantes* were not great participants in the specialized retail trade economy; they could barely afford to buy food items they did not produce, much less a variety of manufactured goods. Those residents of hinterland community areas who could afford to buy a variety of retail goods--fazendeiros, shopkeepers, owners of quarries and other sources of raw materials, employed workers of small factories in Dores de Campos, and other tradesmen and professionals--could usually afford

a bus trip to the larger centers of Barbacena and São João del Rei, where prices were frequently lower. The retail stores in Barroso therefore tended to rely on residents of the city for most of their patronage, although these stores were more convenient to many hinterland residents who shopped elsewhere. The special purchases of rural workers and *sitiantes*, such as household goods and linens for an engaged girl's hope chest or dowry, were often made in the city of Barroso, but these occasions were rare, and the retail trade function of the center was not of first importance. However, the city offered the only context for workers and *sitiantes* to enter into the money economy; there they sold produce, firewood, and chickens, either from door to door or at the weekly Sunday market, to obtain the small amount of cash they did have to spend.

Specialized commercial services available only in the city, therefore, were mainly for luxury consumption of the landowning, commercial, professional, and managerial classes. This elite could afford to own and operate automobiles and gas stoves, thereby requiring the services of auto mechanics and gas dealers. They could indulge in the purchase of personal services from a tailor or seamstress, barber or hairdresser. This was the only class with enough contacts outside the community to have much use for telephone, telegraph, and mail services; with enough literacy and interest in state, national, and international events to buy a metropolitan newspaper or national magazine.

The Roman Catholic parish church in Barroso has an official administrative responsibility for the chapels at Pitangueiras, São

João Batista, and Bananal. Unofficially, the priest kept in contact with and visited other chapels that belonged officially to other parishes, notably, the chapel at Padre Brito, under the jurisdiction of the parish of Ibertioga (see Chapter 5). Church influence area is delineated in Figure 14. In addition to the Catholic church, the larger of the Protestant churches of Barroso was officially responsible for sponsorship of a congregation in the neighboring village of Prados, which was without the services of a minister. The other Protestant denominations in Barroso had no members outside the city.

The city of Barroso served as a recreational center for weekend and holiday visits of hinterland residents. City and country residents alike enjoyed the sense of activity, "*movimento*," in the plaza and market place. This activity was especially intense during public celebrations, dances, parades, soccer games in the município stadium, and a crowd in front of the church on Saturday and Sunday evenings. For the men, visits to clean, comfortable city bars and streetside restaurants were a luxurious change from crowded, smelly standup *boutiquins* of the hamlet or rural village. The city of Barroso was the only place within this urban community that had television sets and adequate television reception. Some of the restaurant-bars had television sets, and visitors from hinterland community areas enjoyed watching them. Barroso's movie house had had difficulty in staying in business continuously, because of easy access to theaters in Barbacena and São João del Rei.

In addition to all these links between the community area and the small factory city of Barroso, kinship remains an important

integrating force in the urban community. The fazendeiros have brothers and brothers-in-law who are bankers and lawyers in the center. The rural workers and *sitiantes* have relatives who are factory workers or município employees on public works projects. They came to the city when they were in trouble, to ask relatives for help, to try to get a job, to attend a wedding, or simply to visit. Kinship ties did serve to bind the city and the countryside together.

The Urban Community with a Trade and Service City as Center

The discussion of the urban community with a trade and service city as center compares this sub-type to the urban community with a factory city as center, in terms of ecological structure, population size, trade and service facilities, economic activities, and other features. The role the trade and service city plays in integrating its hinterland community area into the metropolitan community system is discussed in presenting the functional role performed by the trade and service city in integrating lower-level locality groups into the urban community of which it is center. The data reported in this portion of the chapter were collected on visits to the trade and service cities of Campo Belo, Formiga, Oliveira, and Curvelo.

The major similarity between urban communities with trade and service cities as centers and those with factory cities as centers arises from their components and the structural relationship between these components. That is, an urban center and a hinterland of rural and rurban satellite towns and villages with their hinterland community

areas, including incomplete communities, rural neighborhoods, and isolated farmsteads. As in the urban community with a factory city as center, the structural relationship between these parts is one of dominance of the center and subordination of the community area. As urban nuclei, the factory city and the trade and service city are similar in several ways. Both serve to link hinterland community areas with other urban centers and the metropolis. Both are within the same population range, large enough in population size and non-agricultural occupational specialties to warrant being considered urban community centers. Both types of centers possess relatively good road connections and transportation services, permitting hinterland residents easier access to the city than to other localities in the urban community system. In addition, the trade and service city and the factory city both possess a range of types and numbers of retail stores, commercial, and personal services wide enough to satisfy most of the demand of hinterland residents.

However, there are a number of contrasts between urban communities with trade and service cities as centers and those with factory cities as centers, especially in the manner in which the trade and service city integrates its hinterland community area into the urban community and into the metropolitan community. For example, the trade and service city requires a well-maintained and improved road system to serve its own community area as well as to connect it with larger centers. On the other hand, the factory city requires a good external road system for marketing industrial products in larger centers but has less need for a well-developed internal system. Unlike

the factory city, no single industry dominates the production sector, and ordinarily there are many medium- and small-sized factories in various areas of production, especially food and food by-product processing, with the addition of a few other manufacturing enterprises, such as fertilizer plants, soap factories, textile mills, tanneries, and shoe factories. The food processing industries are most numerous, and a variety of types of foods are processed. In four cities of this type, the following types of food processing industries were noted by the author:

Dried beef
Sausage
Meat pakcing
Lard
Gelatin
Ice cream
Cheese
Milk candy (*doce de leite*)
Powdered milk
Butter
Cream (cannery)
Manioc, corn, and wheat flour
Macaroni
Vegetable oils
Coffee (roasting and milling)
Cane alcohol (*cachaça*) (distillery)

Unlike the factory city, the trade and service city has two types of middlemen: (1) agricultural commodities dealers who purchased cereals and coffee from farmers and (2) wholesalers who distributed canned foods, drinks, beer, packaged foods, and domestic utensils to retailers in the city as well as to some in satellite towns and villages. In contrast to the factory city, the trade and service city has a wider range of retail stores, commercial services, and banking facilities. For example, types of retail establishments were found in trade and service cities that did not exist in factory cities; specialized stores carried the following types of merchandise: gifts, shoes, eyeglasses, guns and ammunition, phonograph records and tapes,

cosmetics, books, automobiles, automotive parts and accessories, sanitary fixtures, bicycles, feeds, agricultural supplies, and agricultural machinery. The government-sponsored agricultural supply stores, CAMIG (Companhia Agrícola de Minas Gerais),[6] were found in all trade and service cities. These stores not only provided equipment and materials that commercial supply stores could not afford to stock but also performed an agricultural extension role by sponsoring demonstrations of specialized equipment.

In commercial and professional services the trade and service city is characterized by wider variety and greater specialization, including the services of *despachantes* (bureaucratic facilitators), printers, laundries, and securities brokers. More banks are represented in these cities, especially such banks as the Banco de Brasil, which made loans to farmers under favorable terms unavailable elsewhere.

The social service facilities available in the trade and service city are also more extensive than those in the factory city. The hospitals are usually somewhat larger. They often had the services of a clinical laboratory to aid in diagnosis.

The mass media facilities of trade and service cites also show some differences from factory cities. Both have radio stations and newspapers, but the media in trade and service centers tended to appeal to a wider hinterland of rural residents with special country-style music, *sertanejo* radio programing, and rural news and information columns in the newspapers. An exclusively local function for the media was indicated by the fact that newspapers rarely carried

any state, national, or international news. Newspapers were primarily means of exchanging local information among community members.[7] Interviews with radio station operators in all of the cities visited revealed that *sertanejo* programs were used to carry messages from the city to the surrounding rural areas. Often the messages were personal: "Jose Maria, your mother is in the hospital in the city, but she is doing well."[8] As a similar type of public service, every *sertanejo* program had an obituary section to notify friends and relatives of deaths and burial arrangements; prompt notification is essential to the Brazilian custom of burying the deceased within twenty-four hours of death.

The public services found in the trade and service city are more extensive than those found in the factory city, especially as represented by federal and state agencies: state school inspectors, social security offices, health stations, and all rural-oriented services, such as the agricultural extension service (ACAR), the *sindicatos* (unions) of rural workers and employees, and the rural worker's health service (FUNRURAL).[9]

The occupational and class structure of the trade and service city differs from the factory city in that no single industry employs a large number of residents. There tended to be, as a result, a larger percentage of employed persons in a wider range of occupations that were non-industrial, especially commercial sales and services, federal and state agencies.

The spatial pattern of the trade and service city is not like that of the factory city. Because there are no large factories and

no factory-owned housing, the pattern of homogeneous residential zones is not as marked as in the factory city. The only distinctive zone is a commercial zone near the center of town, but this zone was not characterized by tall or otherwise impressive structures, as it was in multi-functional cities. Usually the church building dominated the city plaza, as it did in rural and rurban towns and villages.

The trade and service city also plays an important role in integrating its hinterland community area into the metropolitan community system. The export of products to other large population centers is as essential to the economy of the trade and service city as to the factory city. Most trade and service cities had the services of good bus terminals and paved highways as well as railroad service. Like the factory cities, these cities served as distribution points for electrical energy and petroleum products.

Unlike the factory city, the wholesale functions of the middlemen described above made the trade and service city an important commercial center and source of foodstuffs being sent to larger cities and to the metropolis. Its food processing plants not only serviced the trade and service city itself but also provided preserved and marketable food for residents of the metropolis of Belo Horizonte.

The function of the trade and service city in integrating residents into the metropolitan community has many social ramifications. The trade and service city was often the first contact of rural migrants with urban life styles before they moved on to the metropolis. The trade and service city had the highest-level schooling available in the urban community and prepared elite students to

go on to higher education in other urban centers of the metropolis.

The relationship of the community area to the trade and service city is similar to that described for the factory city, with the addition of trade, service, and other unique facilities mentioned above. These hinterland areas and subordinate localities are shown for urban communities with trade and service cities as centers in Chapter 9 (Curvelo, Formiga, Oliveira, Campo Belo).

The Urban Community with a Multi-Functional City as Center

The discussion of the third sub-type of urban community includes the comparison of it with the two types discussed above. Population; location; nature of the community area; transportation; differentiation in economic, social, and administrative activities; and nature of its patronage and service areas are compared.

The major similarity of the urban community with a multi-functional city as center to the trade and service city and the factory city communities is in ecological structure: a dominant urban center with a community area of subordinate lower-level locality groups. Other features common to all urban communities, as described initially in this chapter, also constitute the urban community with a multi-functional center.

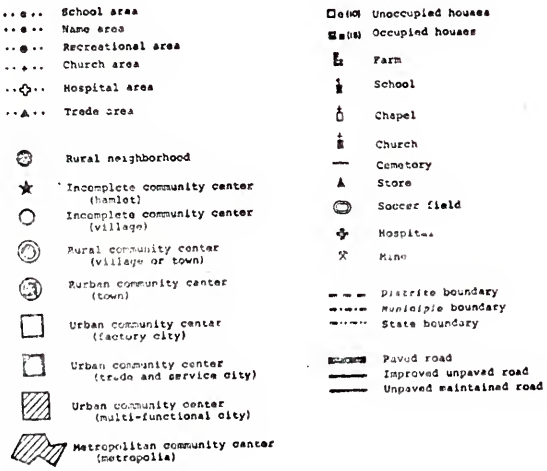
Important differences exist between the urban community with a multi-functional center and the urban community with either a factory center or a trade and service center. Whereas factory cities and trade and service cities are roughly in the same population range, the

multi-functional city usually has a much larger population, between 35,000 and 125,000 inhabitants. The number of subordinate locality groups in an urban community with a large multi-functional city as center is greater, and the territory of the community area is therefore larger, than any lower-level urban center. The full range of subordinate locality groups is almost always represented, including not only rural neighborhoods, incomplete communities, rural communities, and rurban communities but also smaller urban communities of the first two sub-types.

The subordinate locality groups are connected to the multi-functional city by a network of farm trails, dirt roads, improved dirt roads, and portions of paved state and federal roads utilized by a variety of vehicle-, animal-, and human-powered means of transportation; all described in greater detail in the case study of Barroso above. A unique feature of transportation in this third sub-type of urban community is a greater number of paved highway links to subordinate locality groups, especially to some rural and rurban community centers (see Figure 15). The existence of paved highways also enhances the inter-relationships of the urban community with a multi-functional city as center and of the metropolis.

The road links are often direct, paved federal highways that cut the time required to make the trip between city and metropolis. For example, the rural community center of Resende Costa is reached by following 14 miles of dirt road from a paved highway that goes to Belo Horizonte. The total distance from Resende Costa to Belo Horizonte is 97 miles. The total travel time required to make the

LEGEND


School area
Name area
Recreational area
Church area
Hospital area
Trade area
Rural neighborhood
Incomplete community center (hamlet)
Incomplete community center (village)
Rural community center (village or town)
Rurban community center (town)
Urban community center (factory city)
Urban community center (trade and service city)
Urban community center (multi-functional city)
Metropolitan community center (metropolis)
Unoccupied houses
Occupied houses
Farm
School
Chapel
Church
Cemetery
Store
Soccer field
Hospital
Mine
District boundary
Municipio boundary
State boundary
Paved road
Improved unpaved road
Unpaved maintained road

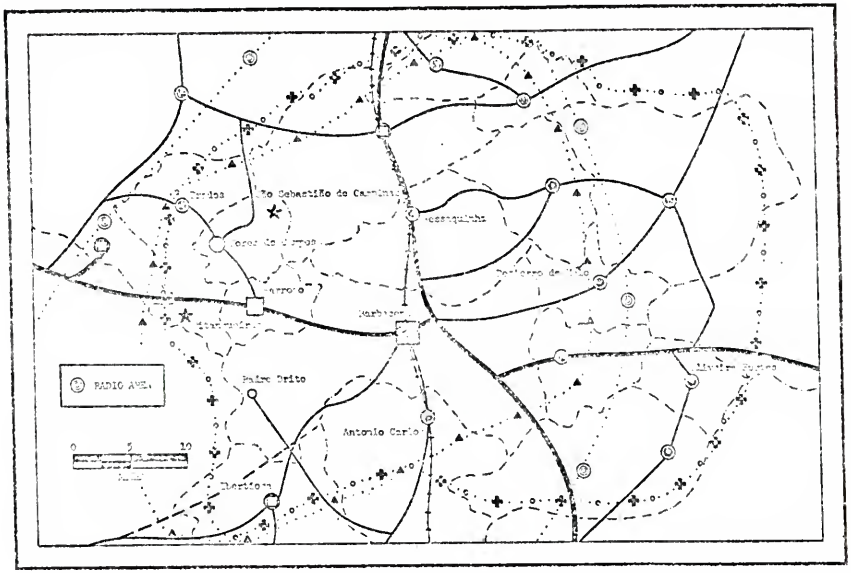


Figure 15. Socio-ecological boundaries of the urban community of Barbacena

trip by bus was four hours. On the other hand, the urban community center of São João del Rei lies 116 miles from Belo Horizonte, all of it paved. As a result, the total travel time required to make the trip by bus was three hours and thirty-five minutes. Although Resende Costa is nearer to Belo Horizonte in distance, it is further in terms of time and comfort to the traveler

Another feature of the transportation system brings many of the multi-functional cities into frequent and intimate contact with the metropolis by express bus service to and from the larger cities. Going between Belo Horizonte and Resende Costa involved a change of buses in another city. These changes could require delays of several hours in addition to longer travel time. These delays were avoided by express buses on a schedule of limited stops on direct routes. The express bus between São João del Rei and Belo Horizonte, although it ran but once a day, took only two hours and forty-five minutes to make the trip. Thus, in terms of time, many multi-functional cities have become more closely connected to the metropolis than have some physically nearer centers.

In addition to the railroad service ordinarily found in these cities, many have airports for government and private aircraft, and two larger cities, Governador Valadares and Montes Claros, had daily scheduled air service to the metropolis. The existence of airports allowed members of the elite, government officials, and industrial executives to keep in touch with and visit, with a minimum of time expended, cities where their agencies, enterprises, and interests are located. This facility allows the integration of macro-institutions

and policy making throughout the area of influence of Belo Horizonte. This influence affected the majority of residents in these urban communities but did not ordinarily draw them into direct contact with the metropolis.

The urban community with a multi-functional city as center has greater differentiation of economic activities than the previously discussed sub-types of urban communities. All types of food processing industries discussed in prior cases are located in these communities, with the addition of many others. Furthermore, enterprises manufacturing various types of consumer goods are equally important. Some types of industrial activities not found in smaller urban centers exist in multi-functional cities:

Sugar refineries
Cereal processing plants
Beer and soft drink bottling plants
Vegetable canneries
Milk pasteurization plants
Paper-making mills
Stamped aluminum factories
Clothing factories
Thread factories
Auto parts factories
Assembly plants for scales
Door and window frame factories
Venetian blind factories
Glass factories
Cigarette factories

Most types of industrial activities found in small urban centers are also found in multi-functional cities.

In addition to these production enterprises, these cities also have a wider range of middlemen with a higher degree of specialization than middlemen in the trade and service city. There were grain elevator operators and cereals and rice dealers. Charcoal dealers bought from local producers throughout the hinterland of the urban community and resold to steel mills in Belo Horizonte and other steel centers. The wholesalers included dealers in agricultural and veterinary products;

petroleum products; medical and dental supplies; wine, beer, and soft drinks; pharmaceuticals and paints.

Retail stores found in large multi-functional cities also reflected a greater degree of specialization, a wider range of available goods, and a more complex form of store management than did stores in lower-level centers. For example, in multi-functional cities were stores that specialized in electrical materials; galvanized pipe; gravel, marble products; typewriters, steel cabinets, rubber stamps, office equipment; glass and porcelain ware; pumps, water filters, hoses; toys, ceramics, gems; used furniture, rugs; leather goods, sporting goods; notions for sewing, knitting, and crochet work; shirts, slacks; auto glass, auto electrical parts, auto radios, batteries, tires, radiators, and other parts. These specialties also reflected a wider range of goods available. The stores in multi-functional cities were not always single ownerships or family proprietorships but were often affiliated with national or state-wide chains of stores, e.g., department stores and supermarkets. Credit was offered on a more formal, less personal basis, involving signed contracts and credit bureaus.

Commercial services available in multi-functional cities were also more specialized within a wider range of offered services than in lower-level localities. These services were especially geared to the increased demand for luxuries in multi-functional cities, due to a larger number of middle and upper class residents. The commercial service sector was not as linked to metropolitan influence as the wholesale and retail sales sectors. The types of commercial services

found in this level of urban center were not normally found in lower-level centers:

Real estate sales	Car wash
Investments	Parking garage
Curtain making	Judo school
Travel agency	Insurance company
Driving school	Data processing service
Body shop	Advertising agency
Decorator	Commercial refrigeration
Sauna	Earth-moving equipment rental

In addition to commercial services, the service sector was enlarged by a greater variety of professional services and occupational specialties available, from public health nurses, psychiatrists, pulmonary specialists, cardiologists, gynecologists, pediatricians, clinical pathologists, and university professors from a variety of disciplines.

The multi-functional cities also demonstrate greater differentiation in social and administrative activities as well as a greater degree of metropolitan influence and control in such activities. This differentiation could be most clearly seen in public agencies, public utilities, voluntary associations, social services, religious organizations, and recreational facilities. Such agencies as regional headquarters for the rural extension service, regional department of education, regional department of transportation, regional health department, departments within the município government (such as município statistics and rural sanitation), and branches of the armed forces were found in these cities. Like some lower-level localities, these cities provided the services of utilities such as telephone service, electricity, water, and sewage treatment. Of course telephone service was more widespread, and connections to the metropolis were better than in most smaller urban centers, whose telephone calls were

routed through intermediate stations on the way to the metropolis.

The number and variety of voluntary associations is much greater in this urban level of locality, but when compared with North American voluntarism, these associations were few. In addition to groups found in lower-level localities, voluntary associations included commercial associations, chambers of commerce, credit bureaus, Masonic lodges, a variety of social clubs (ethnic, occupational, and social class), employee associations, professional association, and automobile clubs. Greater differentiation in social services was shown in a larger number of hospitals and the more specialized character of health facilities, notably in maternity care, psychiatry, and pulmonary diseases.

The educational establishments included public and private primary, secondary, and university-level institutions found in other localities, with the addition of some specialized vocational schools, such as typing and hairdressing schools. The university programs offered in multi-functional cities were different from those offered in factory cities and in trade and service cities, where curricula and scheduling were geared largely to a commuter population that attended in the evening and on weekends. The multi-functional city had a large resident population of students, many from the community area, who usually found places to live in the city during their university careers. The universities in these cities had, in general, better trained faculty members and a wider variety of courses offered than universities in the smaller urban communities.

The religious organizations were also more diverse, reflecting a wider variety of affiliations in the more heterogeneous community as well as the higher levels of organizational structure within religious institutions, especially the Catholic hierarchy. For instance, the urban community with a multi-functional city as center often had a number of parishes as well as the seat of a bishop within its community area. The Catholic church was endeavoring to make parish boundaries conform with município boundaries, for "greater simplicity," the author was told.[10] Another religious service available in multi-functional cities was social work. Although many hospitals and schools in lower-level localities were operated by religious philanthropic organizations, the numbers and types of social service projects increased in these cities. For example, orphanages, health clinics, and regular welfare aid were all administered by Catholic organizations in large cities of this type. Furthermore, the Protestant churches, which in lower-level localities were too small to be able to support social work programs of much impact, found themselves large enough to do so in multi-functional cities. Often these programs were aided by foreign missionaries, who were more commonly found working in these larger cities than in smaller urban centers.

The greater diversity in social activities was reflected in the more elaborate recreational facilities available to residents of both center and hinterland community area in multi-functional cities. These cities were known for sponsoring religious pageants, such as the Semana Santa (Holy Week) pageant at São João del Roi, which attracted persons from the community area, from other communities,

and from the metropolis. Cities in livestock regions often had grounds for annual animal expositions. The federal lottery had offices in multi-functional cities that took wagers on professional soccer matches. The movie theaters had a variety of films and were open every night. Nightclubs exemplify the greater variety in entertainment facilities available in multi-functional cities.

All of the functions that the center forms for its community contribute to determining a composite community area boundary, although each service area has its own characteristics. The internal bus service area, for example, was the smallest, since this service followed only the better roads and linked the larger centers within the community to one another. The primary trade zone was a little larger, not restricted to bus routes but including all areas within reasonable walking distance for daily visits to and from the city. The secondary trade zone included localities that were farther away, whose members made only occasional visits to the center for the purchase of specialized goods and services. The hospital zone was often as larger as or larger than the secondary trade zone, since people traveled longer distances and for longer periods of time when specialized medical care was required. The university also had a wide patronage area, with a number of commuter students comprising a significant part of the student body. However, as mentioned above, commuters made up a smaller proportion of students in these universities than in universities in smaller centers.

The newspaper patronage zone was probably the largest in area, reaching all localities having important ties to the multi-functional

city. Most of these cities had three or four newspapers, with differing editorial points of view, frequencies of publication, and content coverage. Newspapers in multi-functional cities published news, notices, and advertising relating to the city center and localities within the community area. All major metropolitan newspapers from Belo Horizonte, Rio de Janeiro, and São Paulo were available on newsstands in multi-functional cities, but papers from Belo Horizonte were purchased at least twice as frequently as other papers. In papers from Belo Horizonte, columns of "news from the interior" often covered the events and happenings in multi-functional cities within the metropolitan community area.

The ecological structure of the city itself differs from the factory city and from the trade and service city. Like the factory city, the multi-functional city has residential districts for relatively homogeneous social classes. However, the style of housing differs; apartment buildings were found in these larger cities, although they were small, housing seven or eight families as a maximum. Commercial buildings of multi-functional cities were different from those in previously discussed centers: these structures were rarely used as residences as well as commercial locations. Both commercial and industrial activities are more ecologically segregated in these cities than in urban centers of either of the other sub-types discussed.

The contrasts between the factory city and the trade and service city, on the one hand, and the multi-functional city, on the other,

as centers of urban communities can be most clearly demonstrated by examining the city of Barbacena.

Barbacena

Barbacena is located in the Campos da Mantiqueira, one of the most highly urbanized regions in the metropolitan community of Belo Horizonte. Barbacena's influence area is somewhat limited, therefore, by competition from two nearby urban centers, São João del Rei and Conselheiro Lafaiete, 38 and 47 miles from Barbacena, respectively. Barbacena is 113 miles south of Belo Horizonte on a federal highway that connects Belo Horizonte and Rio de Janeiro. The trip from Belo Horizonte to Barbacena took three to four hours by bus. Previously, Barbacena was influence more by the metropolis of Rio de Janeiro than by Belo Horizonte, but the highway to Belo Horizonte has been paved during the last decade.

The population of the city was 60,566 inhabitants, as of the 1970 census.[11] There were thirteen lower-level communities within Barbacena's sphere of influence: the urban community of Barroso, the rurban communities of Dores de Campos and Carandaí, and ten rural communities. All thirteen, plus Barbacena itself, had nuclei that are seats of municípios. There was bus service on at least a daily basis over a well-maintained road system from Barbacena to each of these lower-level centers (see Figure 15 for road system).

The ecological structure of the community of Barbacena is complex. The internal ecology of the nucelus reflected the functional diversity of the center and the differentiation of the social

strata. There was a sharply defined commercial center and a variety of homogeneous residential neighborhoods.

The relationship of the nucleus to the hinterland community area is shown in functional ties of varying intensities between subordinate locality groups and Barbacena. Nearer communities with better road connections, such as Antonio Carlos, Barroso, Ressaquinha, and Ibertioga, tended to be dependent on Barbacena's nucleus for a wider variety of goods and services than farther communities, such as Oliveira Fortes and Capela Nova (see Figure 15). The integration of lower-level localities into the community of Barbacena was accomplished through patronage of institutions, agencies, and establishments that existed in the nucleus, e.g., production, selling, and service establishments; medical, educational, religious, and voluntary institutions; mass communications media; and public service agencies.

Production activities found in the nucleus served to draw both visitors and migrants to the city of Barbacena. Activities associated with agricultural products of the region attracted to the city numbers of rural residents delivering produce to the processing plant or redistribution facility. For example, a milk cooperative that supplied the Barbacena area with pasteurized milk received occasional visits from all of 390 members, 340 of whom resided on farms or in small towns outside the município of Barbacena. In addition, the members of two rose grower's cooperatives transported their roses from growing sites, such as Carandaí, to Barbacena, where they were packed for shipment to the metropolis and overseas. Processing and redistribution activities of this type brought hundreds of visitors from the

hinterland community area to Barbacena on a daily or weekly basis. Industrial activities tended to attract migrants, rather than visitors, to the city. Barbacena's two steel mills, numerous textile factories, light manufacturing plants, and food processing plants formed the basis for an industrial labor market that attracted these migrants.[12]

The trade and service activities of Barbacena attracted customers to the city and delivered goods and services directly to the community area. For example, residents of the community area often preferred to shop in Barbacena, instead of a nearer, smaller center, because of the wider range of merchandise, the larger number of stores, the larger size of stores, and the lower prices found in Barbacena. Residents from Dores de Campos made most of their outside purchases in Barbacena, rather than in Barroso, because of the wider range of retail establishments in Barbacena. The wholesale dealers of Barbacena often delivered goods such as beverages, bottled gas, canned and packaged foods, and gasoline to retail outlets in subordinate centers, including Barroso, Ibertioga, Dores de Campos, Antonio Carlos, and Ressaquinha.

The large number and variety of medical specialists found in the hospitals in Barbacena--including some not found even in the competing multi-functional center of São João del Rei--attracted patients from a wide patronage area. These specialties included cardiology, dermatology, gastroenterology, gynecology and obstetrics, pathology, psychiatry, and pulmonary diseases. Most of these doctors worked in four general hospitals in the city, which served the patronage zone indicated in Figure 15. In addition, there were eleven psychiatric

facilities in the city, two of them state operated and nine private. There was a state tuberculosis sanatarium. These specialized facilities served an area greater than the urban community of Barbacena, even serving patients from other states. The health care of residents of the city was facilitated by nine health posts situated in or near neighborhoods of low income persons. This service to the urban poor also added to the attractiveness of the city for migrants.

The urban community center of Barbacena has a highly developed secondary school sector. Nineteen schools offered courses in general education, teacher training, commercial preparation, industrial training, agricultural education, hotel service training, home economics, and air force cadet training. These schools attracted students from many neighboring communities, even those with secondary schools, whether *ginásios* or *colégios*, because of the greater specialization offered and the generally higher quality of teaching. Many students from nearer communities commuted by bus, while those from farther away might board in the city. Barbacena's secondary schools trained teachers for all of the lower-level communities found within its community area, as mentioned above for the rural neighborhood of São João Batista (see Chapter 4).

Besides secondary schools, Barbacena also offers the only university-level courses in its community area, and these courses attracted commuter and boarding students. Two colleges operated by the Catholic church, with the aid of a philanthropic-public foundation, offered courses in teacher training, humanities (letters),

Portuguese, English, French, history, mathematics, and accounting. A college of medicine and a college of agriculture were offering courses but had not graduated their first classes. The city attracted hundreds of students annually to attend both the secondary and the higher educational establishments.

Voluntary associations, including recreational clubs, service organizations, cultural associations, and churches, were more numerous and varied in Barbacena than elsewhere in the community. Out of fourteen recreational clubs, ten had soccer teams that competed with teams from towns and villages in the urban community area. The four service clubs active in the city were the junior chamber of commerce, two Rotary clubs, and a Lions club. School and public libraries and four musical organizations were among the cultural associatons of the city. As for religious associations, a number of Catholic parishes as well as several different, small Protestant churches existed in Barbacena, but there were no diocesan or regional organizations of these congregations, as was the case in São João del Rei. The voluntary sector in Barbacena served as an attraction to migrants rather than as a service to visitors from the hinterland community area.

The four newspapers and two radio stations located in Barbacena integrate residents of the community area with city residents by informing both of news of the city and the hinterland, by attracting them to service and commercial establishments in the city through advertising, and by providing entertainment and religious programs that offered rural residents music and religious views of greater diversity than the more homogeneous towns and villages generated.

Thus, recipients of newspapers and radio programing perceived themselves as part of an urban community from whose center the mass communications media emanated.

The recent proliferation of public services and agencies in Barbacena attracted both visitors and migrants to the city. Regional offices of a number of federal, state, and local agencies found in Barbacena, and not in lower-level centers, served the residents of a wide area. Federal agencies there included tax collectors; the Banco do Brasil; the INPS (Instituto Nacional de Previdencia Social),[13] the social security and health insurance agency; and the main post office, which received mail and telegrams from seventeen other substations, three in the city of Barbacena and fourteen in the hinterland community area. Among the state agencies were the agricultural extension service, the tax collector, the ninth battalion of the military police, and the regional offices of the state education and transportation departments.

All of these agencies brought occasional visitors from relatively large jurisdictional areas to the city for consultation and coordination. Farmers came to Barbacena to see the ACAR agronomists and other specialists as well as to visit the Banco do Brasil, the only bank to handle long-term agricultural loans. Drivers from the hinterland had to come to Barbacena to renew their licenses at DER.[14] Workers had to come to INPS to sign up for social security and health insurance and to obtain working papers. Landowners and wage earners were required to pay taxes in Barbacena. Teachers and local educational leaders made periodic visits to the state education department's regional office to obtain approval for curricula and to submit reports

on programs. The município government annually sponsored on its fairgrounds a livestock show that was attended by large numbers of visitors from the community area and by stock-raisers displaying prize animals from across the state.

Thus, this case study has shown the functional diversity of the center as well as the type and degree of community-wide integration that results from the variety of institutions, services, agencies, and establishments found in the urban community center of Barbacena.

On the Increasing Numbers of Urban Communities

The expansion of the number of urban communities in the metropolitan community of Belo Horizonte during the past two decades is a direct result of improvements in transportation and communications concurrent with the expansion of the area's economy and the increased availability of manufactured goods and specialized services. Improvements in transportation, especially in highway routes, have given certain localities the advantage of superior accessibility to the metropolis, causing them to develop into urban centers. This access has served to facilitate the linkage between lower-level centers and these urban centers, because the metropolis can now provide valued goods and services to residents of rural areas via agencies, institutions, and establishments in these urban centers. Furthermore, there is an increasing demand for agricultural products and raw materials from formerly isolated areas to feed the cities and supply the factories. Thus the relations between rural and urban areas are increasingly interdependent because of the intensified involvement of all sectors in the market economy.

The growing availability of information via better communications facilities has led to greater desire for "modern" goods and services among people who had previously been content with few specialized services and factory-made or processed goods. For example, rural residents now go to great lengths to seek medical care and hospital services for conditions previously treated at home by untrained local practitioners or considered hopeless. Residents of hamlets, villages, and towns now seek a doctor trained in a medical specialty, because federal health programs will pay for such care and beneficiaries are beginning to see its value.

The residents of all levels of locality groups want education for themselves and their children. They visit urban centers and see public services available that they cannot possibly obtain in their own localities and communities of residence. They hear advertising on the radio for goods to which they have never been exposed. They hear public service messages on the radio advocating the use of devices for a healthier life style, devices that must be purchased in a town or city, such as water filters, which help to avoid certain diseases. Once they obtain manufactured goods, they must maintain them. The repair services are located in the town or city. Implanting industries in these towns and cities creates jobs and, with the attraction of a variety of available goods and services, often produces enough incentive to motivate the rural resident to migrate to urban centers. The increasing flow of migrants from open country areas into villages, towns, and cities has elevated formerly rural centers to urban ones and the previously existing urban centers into

larger, more complex centers. The push of population pressure on farm lands and the pull of rising expectations of goods and services have fueled this migratory flow. But the growth in economic impact of towns and cities is dependent not only on migrants but also on visitors who, while remaining rural residents, have responded to rising expectations of goods and services by seeking these out with increasing frequency in trips to urban centers.

NOTES

1. T. Lynn Smith, *The Process of Rural Development in Latin America* (Gainesville: University of Florida Press, 1967), pp. 68-69.

2. Central Electrical System of Minas Gerais, Incorporated (author's translation).

3. Associação de Credito e Assistência Rural (Rural Credit and Assistance Association; author's translation).

4. Departamento Estadual de Transporte (State Department of Transportation; author's translation).

5. *Sinopse preliminar do censo demográfico, Minas Gerais,* VIII Recenseamento Geral 1970 (Rio de Janeiro: Fundação IBGE, 1970), p. 71.

6. Agricultural Company of Minas Gerais (author's translation).

7. Albertino Viera, *A crise dos jornais do interior* (Belo Horizonte: Universidade Católica de Minas Gerais, Centro de Extensão, 1972), mimeo.

8. Interview with station manager, Sociedade Radio Oliveira, Ltda., June 12, 1973.

9. Fundo de Assistência e Previdência do Travalhador Rural (Social Welfare and Assistance Fund for Rural Workers; author's translation).

10. Interview with aide to the bishop of São João del Rei, May 15, 1973.

11. *Sinopse preliminar*, p. 71.

12. *Anuário industrial de Minas Gerais, FIEMG, 1972-1973* (Belo Horizonte: Federação das Indústrias do Estado de Minas Gerais, 1973), p. 255.

13. National Institute of Social Welfare (author's translation).

14. Departamento Estadual de Transporte (State Department of Transportation; author's translation).

Chapter 9
The Metropolitan Community

In the description and analysis of the metropolitan community of Belo Horizonte, the largest of the locality groups identified in this study, consideration is first given to the concept of metropolitan community. How this form of socio-ecological organization has been conceptualized in regard to other instances of metropolitan formation is then considered. Next, socio-cultural characteristics of the metropolis, in terms of its great concentration of people and controlling institutions, are presented to support the designation of the city of Belo Horizonte as the principal nucleus of an emergent metropolitan community. Finally the functional inter-relationships between the metropolis and lower-level locality groups within the territorial limits of the community are examined in order to demonstrate the dominant role Belo Horizonte plays in the socio-ecological integration of the metropolitan community system, consisting of that array of rural neighborhoods, incomplete, rural, rurban, and urban communities described in previous chapters.

The Concept of Metropolitan Community

In discussing locality groups in previous chapters, the socio-ecological organization of each level of locality group retained the structural forms of the level of locality groups beneath it, i.e.,

rural neighborhood, incomplete community, rural community, etc. Within each higher level of organization, smaller units are integrated as parts of a larger whole. In a similar manner, from an ecological perspective the metropolitan community can be conceived as the highest level of locality group integrating a number of these subordinate units and a major nucleus, or metropolis.

The metropolitan community, then, can be viewed as (1) composed of a dominant center, or metropolis, having a relatively large population compared to other cities in its region. In addition, the central city possesses greater economic and social resources than any of the types of urban center discussed previously. Thus the metropolis exerts an influence on these urban centers as well as in the surrounding territory that constitutes its sphere of influence. (2) Surrounding the primary center are a number of subordinate communities. In spatial terms, some of the localities are nearby satellites of the metropolis, while others are relatively distant. The more distant urban communities, having their own principal cities in direct contact with the metropolis, exert their influence over smaller hinterland spheres of influence, consisting of rural neighborhoods, incomplete, rural, and rurban communities.

Such a constructed type, or model, of the metropolitan community represents an attempt by a social scientist to conceptualize the ecological patterns of a technically advanced urban society. Since the early 1930s, increasing ease and rapidity of travel, especially by auto and by truck, have enabled the larger cities to extend their economic and social influences to areas far beyond their

immediate environs. This striking increase in the "urbanization" of the countryside, due to new inventions and improvements in transportation and communications, has been achieved in the United States in a relatively short period of time. The process was most clearly manifested in the movement of larger numbers of people from rural areas to the metropolis or to other urban centers.

However, from the perspective of socio-ecological organization the increased availability of specialized institutions and services located in the metropolis has extended a metropolitan way of life far beyond the territorial limits of the metropolis to larger numbers of persons resident in smaller cities, towns, rural villages, and open country. In the words of McKenzie:

> The coming of the motor vehicle and the paved highway, the expansion of the press and other agencies of communication have brought the city and its hinterland into a closer functional relation. . . . Geographically it extends as far as the city exerts a dominant influence. . . . The metropolitan region [community] represents a constellation of centers, the interrelations of which are characterized by dominance and subordination. Every region is organized around a central city or focal point of dominance in which are located the institutions and services that cater to the region as a whole and integrate it with other regions. . . .Certain functions, notably communications, finance, management, and the more specialized commercial and professional services, are becoming more highly concentrated in or near the center of the dominant city.[1]

Following McKenzie's initial attempts to describe and delineate the metropolitan community, other sociologists have added to or modified McKenzie's basic conceptual model, using empirical research. More recent models have emphasized the role played by strategically located subordinate urban centers, the medium- and large-size cities

that perform important intermediate functions as specialized nodes in the network of locality groups that make up the metropolitan community system.[2] From this perspective the metropolitan community can be differentiated spatially into four functionally interdependent parts. (1) A *metropolis* is the dominant urban center where are located the leading economic, social, and cultural institutions as well as the hub of the transportation and communications system for an entire metropolitan community. (2) A *primary area* consists of the metropolis's nearby satellite cities, towns, and countryside; part of this area, made up of communities in close proximity to the metropolis, constitutes a community zone in which residents travel to work and make purchases on a daily basis. (3) A *secondary area* is composed of a variety of locality groups whose social and economic activities as residents of these communities are divided between the metropolis and their own local rural, rurban, or urban centers. (4) A *tertiary area* consists of subordinate communities so distant from the metropolis that only a limited number of community residents have regular contact with the metropolis. However, to the extent that economic and socio-cultural forces emanating from the metropolis (trade, banking, newspapers, radio, television) affect the life styles of residents of such peripheral communities, these residents should be recognized as participants in the metropolitan community.

The Metropolitan Community of Belo Horizonte

The emergence of Belo Horizonte as the dominant center of a metropolitan community system is a relatively recent phenomenon (see

Chapter 3). Although no approximate date can be assigned to the present stage of ecological organization, the changing character of Belo Horizonte, as well as its increased functional relationships with other locality groups in the state of Minas Gerais, began in the period during and after World War II, and this development has accelerated during the past two decades. Two outstanding factors in the changing character of the metropolis are: (1) the increase in the aggregate population of the central city and of its satellite communities and (2) the increase in the variety of functions performed by institutions and agencies located in Belo Horizonte. Certain functions, notably communications and transportation, wholesale trade, manufacturing, government administration, commercial and professional services, finance, management, and specialized educational, cultural, and health services, are today highly concentrated in or near Belo Horizonte. Most of these institutions and services cater to the entire metropolitan community, integrating residents of outlying communities with the metropolis as well as with other metropolitan communities in Brazil.

Concentration of Population

Each of the last four censuses for the state of Minas Gerais has reported an increasing concentration of population in urban geographical areas. In 1940, out of a total state population of 6,763,416, only 816,211 were urban residents. By 1970, more than half of the state's population of 11,645,095 was living in towns and cities with a total urban population of 6,167,113. Of this last figure, Belo Horizonte's 1,255,415 represents 26 percent of the state's total urban population.

The state capital was planned to provide physical facilities, governmental structures, and residential housing for a maximum projected population of 250,000. However, during the first half-century of its existence, population growth was relatively slow, the anticipated one quarter-million being reached only as late as the 1940s. In marked contrast, the past several decades have seen a striking phenomenon of population increase, as Table 1 demonstrates.

Table 1

Population of Belo Horizonte

1898	10,000*
1900	13,472
1920	55,463
1940	211,377
1950	352,724
1960	693,328
1970	1,255,415

Source: IBGE

*Estimated population

Coupled with this sizable increase in Belo Horizonte's population has been the rapid expansion of the population in the metropolis's satellite cities. For example, Contagem, adjacent to Belo Horizonte, enlarged in population from 20,824 in 1960 to 108,529 in 1970. Other cities in the metropolitan community have shown equally impressive population increases.

Table 2
Population of Other Cities

	1940	1960	1970
Governador Valadares	5,734	70,494	125,174
Barbacena	19,238	41,930	57,766
Divinópolis	9,593	41,544	69,872
Teófilo Otoni	11,968	41,013	64,568
Montes Claros	13,768	40,545	81,572
Sete Lagoas	10,537	36,302	61,063
São João del Rei	22,551	34,609	45,019
Coronel Fabriciano	1,838	34,418	89,215
Conselheiro Lafaiete	14,352	29,178	44,894
João Monlevade	--	27,042	38,689
Lavras	11,075	23,793	35,489

Source: IBGE

Migration to Metropolitan Areas

The population of the state of Minas Gerais, in general, is moving toward areas of high density. This trend is especially true of rural migration to the metropolis and to other urban centers in the state as well as to those in neighboring states. The major portion of migration out of the state during the decade 1960-1970 has been moving to the industrial metropolitan centers of São Paulo (37 percent) and Rio de Janeiro and Guanabara (20 percent), with the largest part of the remaining migratory flow going toward new settlement areas in Parana, Mato Grosso, Goias, and Brasília. The majority of migrants to such out-of-state areas were from the regions of the Triángulo and the Zona do Sul.

During this same period Belo Horizonte received large numbers of migrants from the regions of Metalúrgica and Zona da Mata. Migration accounted for 59 percent of the city's population increase between 1950 and 1970. During the past five years, large numbers of surplus agricultural laborers from the northern region of the state (today dominated by large-scale livestock enterprises) have been added to the city's population; the majority of these rural migrants have settled in the *favelas* (squatter settlements) that ring the metropolis.[3]

Metropolitan Institutions and Services

The higher concentration of population in Belo Horizonte, compared to the multi-functional cities, has been a primary factor in the city's greater and more diversified production of goods as well as in the location of more specialized institutions and services available to residents of both the metropolis and the metropolitan community as a whole.

The greatest concentration of diversified manufactures in Minas Gerais is located in Belo Horizonte and its immediate environs. In addition to traditional transformation industries located in the metropolitan community's towns and smaller cities (wood, furniture, leather, textiles, clothing, shoes, food and beverages), Belo Horizonte is the dominant location for the state's modern dynamic industries: chemicals, plastics, rubber, paper; mechanical, electrical, and transportation materials (64 percent of total metropolitan production). In 1972 the metropolitan center provided approximately 40 percent of

the state's total industrial output, with workers employed in manufacturing accounting for 18 percent of the total metropolitan work force.[4]

Belo Horizonte functions as both the leading retail and wholesale center within the metropolitan community. In 1972, 82,693 workers were employed in this sector of the metropolitan economy. The variety of specialized retail stores found in the large multifunctional cities (see Chapter 8) were duplicated in the metropolis, but on a larger scale in terms of number of retail stores and quantity and quality of merchandise available. A feature of retail trade unique to Belo Horizonte, was the presence of multi-story department stores in the central business district and of supermarkets located in the city's downtown area as well as in outlying residential neighborhoods.

Wholesale trade establishments and trucking enterprises in Belo Horizonte have benefited from the improvement and expansion of the highway system connecting the metropolis to its subordinate urban centers. As a consequence, the city's major wholesalers have expanded their "trade areas," dealing either through middlemen or directly with retail stores in distant urban centers such as Barbacena (see Chapter 8). The distribution of goods included: cloth and ready-made clothing; canned food and beverages; fuel; domestic appliances; auto and truck parts; office, school, and drug supplies; industrial machinery; construction material; and chemical products.[5]

Belo Horizonte's status as capital of Minas Gerais serves to intensify its dominant position within the metropolitan community.

As administrative center for the whole of the state, the city was envisioned by its planners solely as a bureaucratic and educational center for the state. Today employment in the public sector is proportionately less of the total metropolitan labor force (18 percent) than it was in the early part of the century. However, the functional importance of government has expanded rapidly in recent decades as a result of both federal and state participation in economic, social, and welfare programs.

In addition to local public services provided by the government of the *município* of Belo Horizonte, a number of state departments and regional federal agencies located in the metropolis served the needs of communities and residents throughout Minas Gerais. These departments included transportation; education; health; industry, commerce, and tourism; treasury; and statistics as well as special development agencies such as CEDEPLAR (Center for Regional Planning) and CODEVALE, the agency responsible for the development of the economically and socially depressed region of the Jequetinhona valley. Important federal agencies located in Belo Horizonte included SERPHAU (Housing and Urban Affairs), IBGE Brazilian Institute of Geography and Statistics), INCRA (National Institute for Colonization and Agrarian Reform).

Belo Horizonte serves as the financial center for the metropolitan community. Its banks also compete with the banks of neighboring metropolises in all regions of the state. Of the forty-eight banks located in Belo Horizonte, thirteen had their headquarters in the metropolis, with 111 branch banks located in smaller centers within the state. Among this number were the Banco Mercantil de Minas

Gerais, Banco Irmoãs Guimarães, Banco National de Minas Gerais, and Banco Comércio e Indústria de Minas Gerais. The larger number of branch banks in Belo Horizonte whose headquarters were in other metropolises attest to the city's significant financial position within the national banking system. Five branch banks from São Paulo, three from Rio de Janeiro, two from Salvador, two from Brasília, and one from Porto Alegre had offices in Belo Horizonte. Financial competition between Belo Horizonte and the large neighboring metropolises of São Paulo and Rio de Janeiro remains strong within Minas Gerais, especially among São Paulo's banks in the region of the Triángulo, where they were represented by nineteen branch banks, seven in the city of Uberlandia as opposed to only two in that city from Belo Horizonte.

The only newspapers with state-wide distribution were located in Belo Horizonte. Of the twelve newspapers published in the city, five had daily circulation: *Estado de Minas, Diário da Tarde, Diário de Minas,* and *Informador Comercial.* The biggest daily, *Estado de Minas,* was distributed to all sections of the state; the largest consumers (between 1,000 and 1,200 copies) outside the metropolis were the multi-functional cities of Divinópolis, Montes Claros, Sete Lagoas, and Governador Valadares. One page of each edition was devoted to news from the interior, covering local events in the smaller communities (see Barbacena, Chapter 8). Two nationally circulated newspapers, *Estado de São Paulo* and *O Globo,* from Rio de Janeiro, were *Estado de Minas*'s biggest competitors within Minas Gerais. The improvement in the highway system, reducing the time to truck newspapers,

and the increased use of air service have provided increased access to regions of the state where the demand for these dailies was high; for *Estado de São Paulo*, the regions of the Triângulo and Zona do Sul, and for *O Globo*, the Zona da Mata.

In addition to state, national, and international news made available to non-metropolitan communities by newspapers, Belo Horizonte's twelve radio and five television stations provided news and entertainment via broadcasts to numerous localities outside the metropolitan center.

Belo Horizonte functions as the major center for medical and health-related services within the metropolitan community. Seventy medical facilities located in the metropolis, both public and private, included hospitals, medical and dental clinics, laboratories, and community health stations. Several hospitals in Belo Horizonte served patients outside the limits of the metropolitan area, a national and international clientele. These hospitals included the teaching hospital of the Federal University of Minas Gerais and two other hospitals with national reputations for specialized medical services: São Geraldo, an eye hospital, and Santa Monica, a center for the treatment of tumors. A high dependence on the part of residents living outside the metropolis for medical services provided in Belo Horizonte was in part due to the concentration of both general practitioners and specialists in the city; more than half of the state's 5,600 doctors resided in Belo Horizonte. Of equal significance to this dependence was the lack of readily available medical services in many sections of the state; 399 of the 722 municípios had no resident doctor.[6]

Belo Horizonte functions as the center for the state's system of higher education. Both the Federal University of Minas Gerais, founded in 1930, the first of its kind in Brazil, and the Catholic university enrolled students from all sections of the state and nation. The development of the state's higher education in localities outside the metropolis was being fostered by faculty members who commuted to the newly created regional colleges in larger urban centers, such as the colleges in Sete Lagoas, Divinópolis, and Montes Claros (see Chapter 8). This development was also being fostered by graduates of the universities in Belo Horizonte who took full-time positions at these colleges; they were establishing specialized courses and new departments in the physical and social sciences.[7]

Belo Horizonte is also at the center of the state's newly created tourist industry. Besides numerous recreational activities available to residents and visitors to a city the size of Belo Horizonte, the metropolis is fortunate in being located in a region of the state possessing the largest number and variety of tourist sites. In 1973 a sub-department of tourism was added to the state department of industry and commerce, indicating the growing recognition being received by this sector of the economy of the metropolitan community. Of the three major categories of tourism for Minas Gerais--historic towns, mineral spas, and underground caverns--a substantial number of all three types were easily accessible by paved highway from Belo Horizonte. For example, most of the colonial towns founded during the period of gold and diamond exploration are located near the metropolis: Sabara (15 miles), Caetés (30 miles), Congonhas (50 miles), Mariana (64 miles), and Ouro Preto (58 miles).

Ouro Preto, formerly the state capital and the major city during the colonial and imperial periods, drew more than two hundred thousand visitors to its international summer art festival. The resort city of Araxá, one of four principal mineral spas in the state, was only a four-hour drive from Belo Horizonte over a paved highway to Brasília. Two of the state's largest underground caverns were less than an hour's drive from Belo Horizonte: the Gruta do Maquiné, in the município of Cordisburgo, and the Gruta da Lapinha, in the município of Lagoa Santa.

Belo Horizonte itself provides a number of unique tourist attractions. The major recreational facilities are the municipal park and the Palácio das Artes, containing a large music hall and a permanent exposition of arts and crafts from various regions of the state. These two attractions are located in the center of the city; in the recreational and cultural complex at Bairro da Pampulha, a recently built suburb, are located the "university city," the Museum of Art, the zoo, and the "Mineirão," the second largest sports stadium in the world (130,000 seats).[8]

Belo Horizonte's institutions and services, described above, are more accessible today to larger numbers of subordinate localities of the metropolitan community than these institutions and services were two decades ago. A primary factor in the increased functional integration of the metropolis with lower-level locality groups is Belo Horizonte's central role in the development of the state's modern highway and transportation system. The federal program for construction of paved interstate highways connecting Belo Horizonte to Rio de

Janeiro, São Paulo, and Salvador was started during the early 1950s. By the time of its completion, more than a decade later, the highway network included the linking of Belo Horizonte to large urban centers within the state; the last connection, with the city of Montes Claros, was completed in 1973 (see Figure 1). At the present time, construction is underway connecting the secondary centers to each other via paved highways.

Other projects related to the modernization of the metropolitan community's transportation system during this period included the construction of Brazil's largest bus terminal in downtown Belo Horizonte; the enlargement of daily bus service between the metropolis and subordinate urban centers (see Chapter 8); the extension of the railroad system, primarily the increase in freight-carrying capacity of such lines as the *Estrada de Ferro Vitoria a Minas*, connecting the state's largest iron ore and steel-producing region, the Rio Doce valley, with the port city of Vitória; and the increase in airline service from the metropolis's Areoporto de Pampulha (VARIG, the national airline, and VASP, a regional airline) connecting Belo Horizonte with other national and international centers and with some of the larger urban centers within the state of Minas Gerais (see Chapter 8). As a result of Belo Horizonte's central position in the modernization of the community's transportation system, the metropolis has extended its functional relationships to formerly semi-isolated communities, such as Montes Claros, Formiga, and Barbacena.

Ecology of Belo Horizonte

A complete description of the ecology of Belo Horizonte is not within the scope of this study. Discussion of the spatial organization of institutions and people in the city is therefore limited to socio-ecological traits that are distinctly metropolitan and that focus on the role the city has played as the principal organizing center for the metropolitan community system.

The present spatial arrangement of institutions and people in the urban part of the município extends to more than 90 percent of the total administrative area (335 sq. km.). This large, continuous built-up zone reaching to portions of the adjacent municípios, Contagem on the west and Sabará on the east, has resulted primarily from the recent location of large-scale industrial plants on the city's outer perimeter. This spatial enlargement parallels the accelerated growth in population during the past two decades. Another result of the impact of new economic and social forces active during this period is the obvious modification of the highly rationalized urban design which characterized the city for some time after its creation.

The original physical layout, for an area of 8 square kilometers, followed a design similar to that of Washington, D. C.: a combined axial and grid pattern. In contrast, the street pattern of lately built residential neighborhoods outside the central district has not maintained this regularity in design. However, the most striking evidence of the failure to maintain this rational plan is the haphazard creation of squatter settlements on the urban perimeter during the past two decades, the period of most rapid growth.

The topography of the metropolitan area is best described by analogy to a bowl. A relatively level base, the site of the original plan, leads into steeply sloping sides that are part of the hilly uplands of the Serra da Espinhaço range. The subsequent occupation of these surrounding hillsides, almost totally by residential sites, has eased to a degree the crowding in the center of the city. Nevertheless, recent migration to the metropolis has raised its demographic density to almost 9,000 inhabitants per square kilometer, a density far exceeding that of any other city in the state.

Formerly, the ecological pattern of Belo Horizonte was similar to the planned administrative centers characteristic of most Latin American cities. In general the city has followed the classic urban pattern: high-status and high-income residents near the central plaza (the social and institutional heart of the community) with low-income residents located near the periphery. In the case of Belo Horizonte, the Praça de Liberdade functioned for many years as the sole focus of city life. Surrounded by state government buildings in an imposing neoclassical style, nearby to high-status residential residential neighborhoods, such as *funcionarios*, the *praça* still retains its important role as the center of state administration. Likewise, the *funcionarios*, a kind of residential neighborhood incorporated in the original design of the city at locations near the government plaza, have maintained high residential status. Today, however, the formerly eminent position of the *praça* has been superseded by the city's continually expanding commercial center, the hub of the metropolitan community system. Situated also within the boundary of the old city,

the central business district centers on the Praça Roul Soares and radiates out along the *avenidas* of Amazonas, Augusto de Lima, and Bias Fortes. In this area were located most of the dynamic economic and social institutions that are leading the community to the next higher stage in metropolitan development.

The most concrete visual evidence of this process of metropolitan development is the salient feature of Belo Horizonte's cityscape, salient in all world metropolises: the cluster of commercial skyscrapers and residential high-rise apartments that have resulted from intense competition for limited ground space in or near the central business district. Located here, along with numerous retail stores and service establishments patronized only by city residents, were the largest number of the headquarters of institutions directing the greatest share of the economic and social activities for the whole of this metropolitan community: the largest banks; industrial corporations; chain stores; tourist, advertising, and real estate agencies; building construction firms; and wholesale establishments. Notable among these were the main offices of mineral, dairy, and stock-raising industries that are actively exploiting the richest resources in the region.

The types and locations of industry in Belo Horizonte also displayed the increasingly differentiated ecological structure of the metropolis. This differentiation was particularly apparent in the contrast between more traditional small-scale firms, serving primarily the needs of local residents, and modern large-scale industrial plants, producing goods for regional, national, and international

markets. On one hand is the traditional pattern of small independently owned shops manufacturing items such as furniture, clothing, machine parts. Most of these independent establishments were widely scattered throughout the city, many on the periphery of the central business district. On the other hand emerges the pattern of locating large-scale industrial plants along the perimeter of the built-up urban area, a process begun as early as the 1940s with the construction of the first industrial park just outside this area. Found here were iron and steel plants, food and beverage processing enterprises, cereal mills, brick and tile works, and electrical appliance firms among others.

Complementing the increased differentiation in commercial and industrial sectors were a number of private and public cultural and social service institutions. Located in various parts of the city, these institutions supported a patronage area far beyond the administrative boundary of the metropolis itself. Outstanding among these were the city's numerous hospitals and social welfare agencies, newspapers, radio and television stations, hotels, theaters, museums, sports stadia, parks, restaurants, secondary schools, and universities. Offices of national and state government agencies located in Belo Horizonte were in constant communication with subordinate agencies in the sub-centers of the metropolitan community.

Metropolitan Community Area

The status of regional metropolis was given to Belo Horizonte as the result of studies made by federal and state agencies such as IBGE and CEDEPLAR (see Chapter 3).[9] The territorial limits of Belo

Horizonte's influence area overlap the influence areas of São Paulo and Rio de Janeiro in Minas Gerais, as shown in Figure 1. The functional criteria used by agencies in establishing metropolitan influence areas were primarily economic, although CEDEPLAR's study incorporated indices associated with social services: secondary school and hospital patronage, bus service, telephone calls, telegram and mail service. In this study the area of influence conforms to boundaries of the metropolitan area established by these agencies. The functions of state government and of administrative agencies extended Belo Horizonte's influence to all communities within the political boundaries of Minas Gerais. The delineation and the identification of various levels of locality groups within sub-areas (primary, secondary, tertiary) of the metropolitan community and of various functions integrating the metropolis and these localities constitutes the contribution of this study to the understanding of socio-ecological organization of a metropolitan community.

Metropolitan Primary Area

In the territory adjacent to Belo Horizonte a cluster of smaller locality groups, satellite communities, delimit the primary area of the metropolitan community by virtue of proximity and multi-functional relations with the metropolis. Of thirteen localities in this zone, the most distant is no more than 30 miles from the central business district of Belo Horizonte. Six of the sub-centers have been identified as factory cities, and seven others as either rurban or rural trade and service centers. The factory cities include Caetés, Contagem, Nova Lima, Santa Luzia, Sabará, and Vespasiano. The trade and

service centers include Betim, Ibirité, Lagoa Santa, Raposos, Rio Acima, Ribeirão das Neves, and Pedro Leopoldo.

The case of Contagem best illustrates the benefits derived from close proximity to Belo Horizonte. During the past decade the extension of the industrial park on the western edge of the metropolis into the neighboring município of Contagem has dramatically transformed the character of this formerly agricultural community. Today, with approximately 40 percent of the state's industrial production located in the metropolitan primary area, Belo Horizonte and Contagem account for by far the greatest portion, sharing the leadership role in manufacturing diversified among textiles, clothing, electrical machines, metal fabrication, food processing, and printing. Found also in the other five urban centers was a relatively high percentage of workers engaged in industrial production: Caetés (30 percent), Nova Lima (42 percent), Sabará (22 percent), Vespasiano (27 percent), and Santa Luzia (30 percent). However, these centers were for the most part highly specialized in one type of production. For example, almost all of the industrial workers in Sabará were employed by one large steel mill located there.

Equally demonstrative of the present structural unity in the primary area is the important functional ties that rural communities had with the metropolis. An especially important part of this relationship has resulted from an increase in the region's commercial production of food in response to enlarged demands for agricultural produce in Belo Horizonte and other urban industrial centers in the area. As a result, these rural communities have become increasingly

dependent on relationships with the metropolitan core for economic prosperity and social development.

To a great extent the intensification of the ecological integration of the primary area during the past two decades has come about through either the improvement of the existing road and transport systems or the creation of new systems. Presently, all community centers are linked to the metropolis by paved state or federal highways. In addition, daily commuter bus service facilitates the movement of thousands of residents of outlying communities to the central city. For example, in the rural community of Betim, an average of 28 percent of the inhabitants journeyed to Belo Horizonte on a daily basis.[10]

Metropolitan Secondary Area

Other than the two urban industrial centers of Ouro Preto and Itaúna, the metropolitan community secondary area is composed of rural and rurban communities. Thirty of these types of locality groups, which collectively constituted the Belo Horizonte milk shed area, have been identified as falling within a secondary zone lying from 30 to 60 miles from the metropolitan center.

The demand for milk and milk products by the rapidly growing population in Belo Horizonte and its satellite communities has caused specialization in dairy farming to become exclusive of other agricultural activities in this region.[11] Certain aspects of the increased commercial interdependence between this rural component of the metropolitan community and the core area is best illustrated in the description of the rural community of Cristiano Otoni.

The town of Cristiano Otoni is located approximately 60 miles south of Belo Horizonte, alongside a paved highway connecting the city with Rio de Janeiro. The town serves as the administrative seat of the small município of the same name. Of the four thousand persons living in the community, half resided in the nucleus. Given dairy farming as the economic base of the area, the organization of community life was centered primarily around the local milk producer's cooperative, an associate member of the Central Producer's Cooperative of Minas Gerais, headquartered in Belo Horizonte. The total membership of the local cooperative during the period of this study was 181, with 52 dairy producers from Cristiano Otoni, the remainder from seven neighboring municípios. At that time the total milk production (8,000 liters) was taken daily to a collecting plant in town, cooled, and later trucked to a central packaging plant in Belo Horizonte. This process was duplicated daily in most of the other dairy farm communities in the secondary area; an example of large-scale distribution systems that have been created as a result of metropolitanization.

Metropolitan Tertiary Area

A number of outlying communities, the majority situated between 60 and 120 miles from the metropolis, constitute the third identifiable zone of the metropolitan community. The locality group structure of this geographical area is markedly different from either the primary or the secondary area (see Figure 16 for the extent of this difference). This pattern of increased differentiation in the ecological structure was reflected in the presence of a number of high-order

The delineation of the urban community boundaries represents a composite of the following functional indicators of locality group integration: the patronage of hospitals, secondary schools or colleges, trade and service establishments, newspaper circulation, radio stations, and bus service.

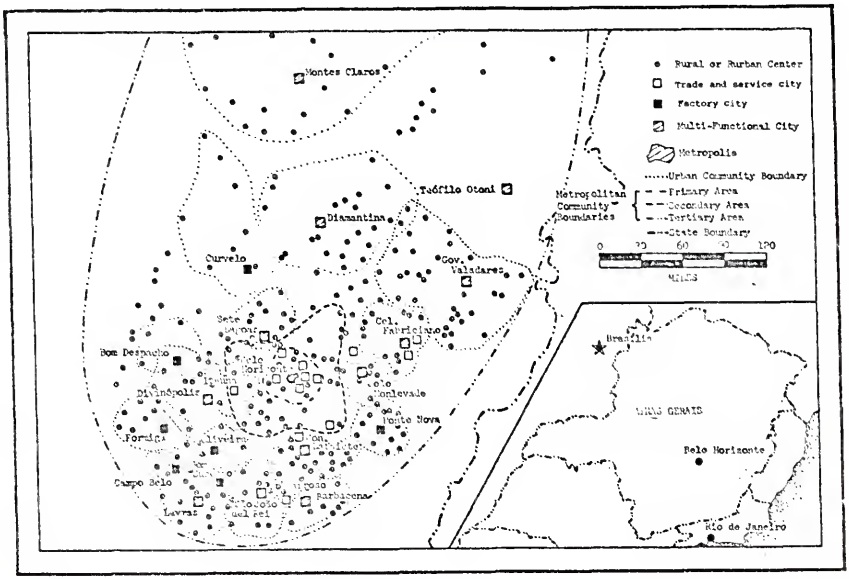


Figure 16. Socio-ecological boundaries of the urban communities in the metropolitan community of Belo Horizonte

secondary centers, each displaying a preponderant territorial influence over a variety of lower-level locality groups. Functional inter-relationships between these sub-centers and lower-level localities and between both and the metropolis are discussed in the case study of Barbacena, a secondary center (see Chapter 8). Of nineteen urban communities whose territorial limits have been determined, eleven centered on a multi-functional city, such as Barbacena; seven, on a trade and service city, such as Campo Belo; and one, on a factory city, such as Barroso.

The integrative functions of these three types of metropolitan secondary centers are varied and complex, but a certain similarity obtains in the character of their relations with the metropolis as well as with lower-level locality groups in their influence areas. Each acted as a node in the communication and transportation network of the metropolitan community, linking smaller and more distant localities to Belo Horizonte. Each served as a commercial center for wholesalers and retailers of industrial products either manufactured or distributed from the metropolis. Finally, each facilitated the dissemination of modern ideas, technology, education, health, and other welfare programs originating in the metropolis through public and private institutions, agencies, and association located in these urban centers.

Summary

In summary, population growth in both metropolis and subordinate centers and the increase in institutions and services available to

larger numbers of both metropolitan and satellite residents, because of improvements in the transportation system, have enlarged the influence area of Belo Horizonte within the state of Minas Gerais. Within this metropolitan community area has emerged a differentiated socio-ecological organization. The socio-ecological structure of the metropolitian community includes (1) the metropolis of Belo Horizonte, from which the majority of modern economic and social forces originate; (2) a primary area, made up of a cluster of satellite communities whose economic activities and social development are intimately connected to the metropolis; (3) a secondary area, basically rural in character, in which the prosperity of farm communities increasingly depends upon relationship to the metropolis; (4) a tertiary area, composed of a variety of more distant localities, whose participation in the metropolitan community system is highly dependent on urban secondary centers with direct ties to Belo Horizonte.

Within the socio-ecological structure of the metropolitan community and ecologically integrated with Belo Horizonte are: farm families residing on *fazendas* or *sitios*; rural neighborhoods; incomplete or partial communities with hamlets as centers; rural communities with villages as centers; rurban communities with towns as centers; urban communities with factory cities as centers; urban communities with trade and service cities as centers, and large urban communities with multi-functional cities as centers.

NOTES

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4. Fundação João Pinheiro, *PLAMBEL*, p. 10.

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7. Moaçyr Andrade, "Belo Horizonte, Corpo e Alma," in *Minas Gerais: Terra e povo* (Porto Alegre: Editora Globo, 1970), p. 324.

8. Soares da Cunha, *O livro de Minas*, I (Belo Horizonte: [1974]), p. 123.

9. Roberto Lobato Corrêa, "As regioẽs de influencia urbana," in *Novo paisagens do Brasil*, Biblioteca Geográfica Brasileira, series D, publication no. 2 (Rio de Janeiro: Fundação IBGE, 1968), pp. 183-92, "Contribuição ao estudo do papel dirigente das metropoles brasileiras," *Revista Brasileira de Geografia*, 30:2 (1968), pp. 56-87; Pedro Pinchas Geiger, Evolução da rêde urbana, Collection "O Brasil urbano," no. 1 (Rio de Janeiro: Centro de Pesquisas Educacionais, 1963); Carvalho Ferreira, *Uma metodologia*.

10. Marilia Velloso Galvão, "Divisão regional do Brasil," *Revista Brasileira de Geografia*, no. 4 (Rio de Janeiro: Fundação IBGE, 1969), p. 91.

11. However, this specialization is partially explained by the hilly terrain of a region where commercial agricultural has never been extensively developed.

PART IV

CONCLUSION

Chapter 10
Summary and Conclusions

This study has attempted to describe the present form of the socio-ecological organization of the metropolitan community of Belo Horizonte. The investigation began with the aim of showing how preceding stages of settlement in this region have affected, and in turn been modified by, the emergence of Belo Horizonte to the status of a metropolis. The main part of this work, however, has consisted of identification and delineation of various levels of locality groups found within the metropolitan community. Equally important from the standpoint of the community as a system has been the attempt to demonstrate the interdependent functioning of each of the levels of locality groups as specialized parts of a larger whole, the metropolitan community. The following summary reviews the conceptual basis and empirical findings for each of the levels of locality groups investigated: the rural neighborhood, the incomplete community, the rural community, the rurban community, the urban community, and the metropolitan community.

The rural neighborhood is the least complex of the locality group structures making up the metropolitan community system. It is a small territorial area where residents engage primarily in agro-pastoral activites and interact with high frequency in face-to-face relationships. The limited number of shared institutions contained within the boundaries of the locality are less than the number necessary

for a full and complete social life. In Brazil as in the United States the dispersed rural neighborhood made up of scattered farmsteads is the primary settlement pattern. The traditional rural neighborhood in Brazil was characteristically highly integrated within itself, consisting of a small number of families living on farms situated relatively close together and having an informal system of mutual aid based on common interests, institutions, and kinship. With this most generalized type, social scientists have identified two distinct rural neighborhoods in Brazil: neighborhoods of peasant small-holdings, *sitios*, and those of medium- and large-scale farms, *fazendas*.

In Minas Gerais prior to the 1950s this characterization of rural neighborhoods as highly autonomous locality groups similar to those found elsewhere in Brazil was valid in most respects. However, as indicated in Chapter 3, the historical particularities of initial settlements, centering on the exploitation of rich mineral deposits in the region (today the core area of the metropolitan community), gave rise to a well-developed agricultural sector geared to the production of food crops for consumption in the mining towns. During a long period of decline in mining activity the majority of the population dispersed into rural isolation, with only some affluent rural residents making periodic visits to nearby villages or towns. This study has attempted to show that with the recent emergence of the Belo Horizonte metropolitan community system, the rural neighborhood, especially in areas where the metropolitan system was in a formative state, has changed internal structures and behavior patterns at the same time that functional relationships between the rural neighborhood and the

larger communities have increased.

Three major types of rural neighborhoods have been identified as extant in the metropolitan community of Belo Horizonte: the fazenda neighborhood, the nucleated neighborhood of small farms, and the neighborhood of scattered small farms. While all three types of rural neighborhood are less autonomous than the traditional isolated localities, they still retain a territorial identification based on propinquity, mutual aid, and shared local institutions that are few in number. This identification is clearly shown in the mapping of major social areas that delineate the rural neighborhoods studied. A significant portion of the modification of internal structures of each of these types, discussed in detail in Chapter 4, has occurred in response to growing influence of social change emanating largely from the metropolitan center of Belo Horizonte and from the subordinate urban centers within the metropolitan community system. The technological obstacles to rapid transportation and communications are being surmounted at an accelerated pace, thereby decreasing the isolation of rural settlements, bringing in modern ideas and techniques, facilitating the migration of the rural population to towns and cities, and modifying the traditional institutions of patron-client relations and mutual aid.

The fazenda neighborhood has been most influenced by the breakdown of the patron-client relationship caused by the exodus from the land of many *fazendeiros* and farm laborers. The nucleated neighborhood of small farms and, to a lesser degree, the neighborhood of scattered small farms have been most influenced by the entrance of small-holders into the market economy; these neighborhoods have changed from a

traditional dependence on subsistence production to an increased reliance on cash crops destined for urban markets. Many of these neighborhoods, it has been demonstrated, now have access to the institutions of trade and service centers of various sizes, because of improved road systems allowing for better bus and milk truck service. This access has changed the material culture of these neighborhoods and has brought residents into a milieu which is characterized by varieties of functionally integrating relationships with larger locality groups within the metropolitan community.

The next higher level of locality group structure is the incomplete or partial community. To this intermediate level in the socio-ecological organization of the metropolitan community, between the rural neighborhood and the rural community, have been attributed a restricted population size and limited numbers and kinds of institutions and services available in the nucleus. Two types of incomplete communities found in Belo Horizonte's community system have been identified in this study: one type has a hamlet as nucleus and the other, a village as nucleus.

Residents of rural neighborhoods surrounding the nucleus of an incomplete community generally have access to additional institutions and services not found within the locality. However, as shown in the case studies of hamlet-centered incomplete communities, Pitangueiras and São Sebastião de Campinas, these extra services were highly restricted. The limited population in the nucleus, ranging from 150 to 200, is composed primarily of agricultural laborers who resided in the hamlet and worked on nearby farms.

In the two communities studied, the few non-agricultural laborers were occupied in quarrying, transportation, and shopkeeping. Unlike the neighborhood bar, which was operated on an irregular schedule, a general store in the hamlet provided most persons with items needed daily. Both the primary school and the local chapel were better staffed than schools and chapels in rural neighborhoods, and the presence of trucks and autos in the incomplete community provided a more ready access to nearby towns and cities.

Incomplete communities having *vilas* as centers, such as Padre Brito, offered a greater range of institutions and services to residents of outlying rural neighborhoods. With a population of 349 in the nucleus, a greater percentage of the residents were occupied in non-agricultural activities. The texture of social life approximated that of a small urb, and the physical facilities of paved streets and piped water for some residents stood in sharp contrast to the rustic appearance of any rural neighborhood. A number of institutions located in the village were patronized by residents of the countryside: a three-room schoolhouse, an active chapel, two general stores, and a health post. Additionally, telephone service was available as well as delivery of mail twice a week.

While it is evident that this higher level of locality group structure offers a broader range of services than the rural neighborhood, it lacked certain institutions necessary for a complete social life: local government, specialized stores, hospitals, banks, secondary schools, and sufficient workers for cash crops. As a result, with improvement in transportation facilities, many residents, especially

the more affluent, were bypassing these centers for towns and cities that provided a greater range in goods and services. Lacking autonomous self-government, these villages lost out to the seat of the *município*, where most of the increased investments in physical facilities and institutions were made. Nevertheless, these partial or incomplete communities remain an important part of the locality group structure of the metropolitan community, especially in the areas most removed from rural or urban community centers.

The rural community is one of the principal levels of socio-ecological integration within the metropolitan community of Belo Horizonte. Conceptually it is composed of two major parts: (1) a village or town nucleus serving commercial, ceremonial, recreational, and other social and economic needs of residents and (2) the surrounding rural neighborhoods, incomplete communities, and isolated farmsteads whose residents patronize the nucleus for services not available in their own localities.

Most of the nuclei of rural communities are seats of the county-like municípios; thus control of local government is placed in the hands of those living in the major population center. Consequently, most of local revenues were spent in the town itself on public projects such as parks, paved streets, lighting, and public buildings. The village or town was a focal point for rural residents because of the existence there of regular bus service to more distant urban centers. Telephone and mail service were more reliable and regularly scheduled.

São Domingos do Prata, presented as a case study in Chapter 6, is a typical rural community within the metropolitan community system.

The socio-ecological boundaries of this rural community did not differ greatly from its administrative boundaries, which was generally the case for representatives of this level of locality group. Approximately 4,000 residents in the nucleus provided a sufficient range of institutions and of economic and social services to satisfy the needs of a majority of more than 20,000 residents of the hinterland area, the greater number occupied in agro-pastoral activities. Some important services which the town performed for residents of rural neighborhoods and hamlets included those of bank, secondary school, parish church, and hospital. The milk producer's cooperative located in the town benefited the fazendeiro class by providing a local facility for collecting and cooling milk prior to shipping it to Belo Horizonte. Operators of small farms had formed a cooperative, headquartered in São Domingos do Prata, from which locally produced fruits and vegetables were sold to the industrial towns and cities of the Rio Doce valley region.

The rural community seems to be replacing the rural neighborhood as the most significant level of socio-cultural, socio-ecological integration for the majority of rural people, because the limited industry in village or town, together with the increased services available there, has created an intense interdependence between agro-pastoral workers of the open country areas and residents of the center.

The next higher level of socio-ecological organization, the rurban community, is a category of locality grouping intermediate between those designated rural and urban communities. Conceptually, rurban refers to a locality more structurally complex than the rural

community, yet lacking the functional diversity characteristic of the urban community. The salient attributes of the rurban community include an approximate balance between the interests of those residing in the town and those residing in the surrounding countryside as well as a balance between the economic and social activities in the center and the agro-pastoral production in the rural portion of the community. Consequently, this type of locality group exhibited a strong interdependence between the open country and the nucleus, based on specialization of functions and division of labor between those who produce food and raw materials and those who work in manufacturing and commercial trade and services in the town center.

Presently there are fewer specimens of this type of locality group than of the rural community within the metropolitan community system. There appears to be greater opportunity for the development of this form of socio-ecological organization in regions that are less highly urbanized. The rurban community of Pompeu, for example, located in the Alto São Francisco region, a rather sparsely populated area, had no urban centers competing with the town for the patronage of the residents in the hinterland community area. Mapping of the socio-ecological boundaries of the ruban community of Pompeu indicated a close correspondence with the administrative boundaries of the munic-pio. Because of its large territorial area encompassing a number of rural neighborhoods and incomplete communities, Pompeu can be described ecologically as having two distinct zones of influence: a zone where rural residents were close enough in terms of distance and of transportation facilities to town to patronize services or work there daily

and a zone where fazenda residents were far enough from town (as on Fazenda Laranja) to make trips to the município seat for trade, services, and recreational activities only about once a week.

Because of its relatively larger population (8,143), the town of Pompeu provided a greater number and diversity of economic, social, and cultural institutions than were found in the nuclei of the smaller locality groups, the rural villages or towns. An important contrast between the centers of rural communities and the little urb of Pompeu is that with a large population and increased social differentiation, it tended to give Pompeu a more cosmopolitan and heterogeneous quality of life than occurred in smaller places.

It is very likely in the future that more instances of this type of locality grouping will be represented within the metropolitan community system of Belo Horizonte, especially in less developed regions. To the north and west of the metropolis a developed infrastructure, particularly an improved road system, would provide access for agro-pastoral products to the urban markets in Belo Horizonte and Montes Claros.

The urban community represents the next higher level of locality group within the hierarchical organization integrating the metropolitan community system. From an ecological perspective this unit is structurally more complex than lower-level localities already discussed. The urban community is characterized by having as nucleus a dominant city whose institutions and services integrate a number of lower-level localities within its sphere of influence. In this study three different sub-types of urban communities have been identified: one has a

factory city as center, another has a trade and service city as center, and the third has a multi-functional city as center.

The urban community of Barroso has been presented as a case study of the sub-type with a factory city as center. With a population of approximately 15,000, the major single source of work and município income was derived from a large cement factory located in the city. The requirements of good roads for transporting the cement to other places have benefited equally the urban residents and the residents of outlying localities. Social and educational services not provided in neighboring rural communities, such as the factory-built hospital and the município-operated secondary school and bus terminal, have benefited residents of neighboring rural areas where these institutions did not exist. In addition, small farmers in the community have found a market for their produce in the growing urban center.

Data have been presented in this study on a number of urban communities having trade and service centers as nuclei. In each of the representative cases of Curvelo, Formiga, Oliveira, and Campo Belo, the city had evolved from a village or small town, because of strategic position with respect to the metropolitan community highway system. As a result, equal efforts have been made by these cities to build road systems connecting all of the numerous rural and rurban communities in the territories surrounding these centers. Unlike a factory city, which depends upon the manufacture of iron or cement, the city which specializes in commercial services is directly related to the production of crops and livestock. Located in these cities were a number of food processing and fertilizer plants, tanneries, and

shoe and soap factories. Specialized trade and service facilities geared to the rural sector included banks, agricultural supply stores, branch offices of ACAR, and wholesale establishments dealing in the distribution of canned goods, beverages, and cereals. Media facilities in the city, such as local newspapers and radio stations, directed their news and advertising toward the residents of satellite rural communities. Added to these specialized functional indicators of urban community integration around a trade and service city were the secondary schools, hospitals, recreational and transportation facilities that have increased the territorial sphere of influence of the small city.

The highest level of socio-ecological integration within urban community classification is the sub-type with a multi-functional city as nucleus. Cities of this type in Belo Horizonte's metropolitan community ranged in population from 35,000 to 125,000. Besides providing a greater number and variety of the institutional services normally found in factory cities and in trade and service cities, the multi-functional cities offered in addition specialized services in the areas of education, health, transportation, recreation, banking, and commerce. As a result, the patronage areas of these cities were extensive. For example, the largest multi-functional city, Governador Valadares, with a population of 125,000, had within its influence area thirty-three lower-level locality groups (see Figure 16).

A detailed analysis of the urban community of Barbacena has been presented in this study to demonstrate the socio-ecological functions the nucleus performs in the integration of lower-level locality

groups within its sphere of influence. Subordinate localities described, such as the rural neighborhoods of Caetés and São Sebastião de Companas, the incomplete community of Pitangueiras, the rurban community of Dores de Campos, and the smaller urban community of Barroso, have been characterized, on this level of socio-ecological organization, as integral sub-parts of the large urban community of Barbacena.

The highest level of locality group discussed in this study is the metropolitan community. The conceptual model that has guided the description and analysis of the structure and the integrative functions of this form of socio-ecological organization is composed of four parts: (1) A metropolis is a city possessing the controlling economic, social, and cultural institutions within the community system. (2) A primary area contains the metropolis's nearby satellite cities, towns, and open country, whose residents' economic, social, and cultural life is intimately associated with that of the central city. (3) A secondary area is composed of a variety of locality groups, whose residents divide their patronage between the metropolis and the local centers. (4) A tertiary area consists of a number of secondary centers, subordinate to the metropolis, yet possessing an adequate range of institutions and services for the majority of residents in hinterland community areas.

This study has shown that the emergence of Belo Horizonte as the dominant center of a metropolitan community system has been a relatively recent phenomenon. Two prior stages of ecological succession were described in the region of Minas Gerais presently occupied by the metropolitan community (see Chapter 3). The first stage, from

1690 to 1810, was a period of initial settlement, whose locations and urban character were determined by gold and diamond deposits widely dispersed in mountain regions of central Minas Gerais. Today, a number of cities, such as Ouro Preto and Diamontina, whose origins date from mining towns of this period are urban components of the metropolitan community. The second stage, lasting from about 1810 to the end of World War II, began as the gold and diamond mines played out, resulting in a major transformation: economic exploitation of the region was shifted from mineral extraction to agriculture and cattle-raising. Concurrently, the settlement pattern changed from a predominantly urban to a predominantly rural pattern. The largest part of the population dispersed into the countryside, either on semi-isolated farmsteads or in small rural villages. Only during the later part of this period, with the construction in the 1870s of the first railroad line connecting Rio de Janeiro to the southern and eastern sections of Minas Gerais, were a few urban centers of significant size developed, such as Juiz de Fora. The creation of Belo Horizonte as the new capital of Minas Gerais in 1889 made little impact on development of these regions, which became increasingly dependent, through the first half of this century, on Brazil's only two metropolises: São Paulo and Rio de Janeiro.

The present stage of ecological organization, as well as the character of changes in Belo Horizonte and the increase in functional relationships between Belo Horizonte and other locality groups in the state of Minas Gerais, began to take shape during World War II. Belo Horizonte's attainment of metropolitan status during the past two

decades has resulted in an increasing ability to compete with the cities of São Paulo and Rio de Janeiro for dominance within the state of Minas Gerais (see Figure 1). Three outstanding factors in the emergence of the metropolitan community were determined: the increase in the aggregate population of Belo Horizonte (from 352,724 in 1950 to 1.2 million in 1970) and of a number of its satellite cites; the expansion in the variety of controlling economic, social, financial, cultural, and governmental institutions located in the metropolis that function for the entire metropolitan community; and the creation of extensive highway, transportation, and communications systems facilitating the flow of goods and services between Belo Horizonte and other parts of the community.

The spatial distribution of locality groups within the influence area of Belo Horizonte was differentiated into three major sub-areas (see Figure 16): the primary area containing a cluster of thirteen industrial and agricultural satellite communities within a radius of 30 miles of Belo Horizonte; a secondary area containing approximately thirty rural or rurban communities lying within 30 to 60 miles of the metropolis and collectively constituting Belo Horizonte's milk shed area; and a tertiary area containing a variety of types of locality groups, the majority situated between 60 and 120 miles of Belo Horizonte. This area is characterized by the existence of a number of subsidiary urban centers, each serving as a locus of influence over a localized area. The development of modern communications and highway systems and the greater use of motor vehicles have channeled increased economic, social, and cultural services from the metropolis through

these intermediate urban centers to larger numbers of people residing in more remote cities, towns, villages, hamlets, and rural neighborhoods with the Belo Horizonte metropolitan community.

The present study has of necessity been exploratory and limited. However, it represents the first empirical investigation of a metropolitan community system utilizing the frame of reference developed by T. Lynn Smith. The merits of this socio-ecological approach lie in combining the static analysis of locality groups as identifiable territorial units of social interaction within a hierarchical order and the dynamic analysis of functions as integrators of locality groups within a systemic whole. Using such an approach, sociologists engaged in community studies will be less likely to ignore the fact that although the unit of study may possess the attribute of semi-autonomy, this unit is structurally related and functionally integrated within a larger whole.

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

T. Lynn Smith, Chairman
Professor of Sociology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Joseph S. Vandiver
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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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